
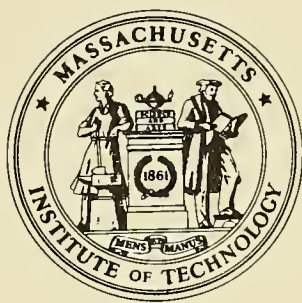


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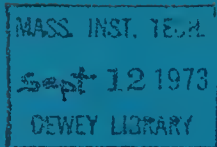


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THE FORMATION OF FINANCIAL CENTERS: A STUDY
IN COMPARATIVE ECONOMIC HISTORY

C. P. Kindleberger

Number 114

August 1973

**massachusetts
institute of
technology**

**50 memorial drive
cambridge, mass. 02139**

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Draft. Comments, corrections, criticism welcome.

I. Introduction

It is a curious fact that the formation of financial centers is not studied today in economics. Partly it falls between two stools. Urban and regional economics which concern themselves with cities discuss the location of commerce, industry and housing but rarely that of finance. (An exception should perhaps be made for Canada [Kerr, 1965, 1967] and for France [Labasse].) A recent United States survey of urban economics mentioned finance only once in the text, and referred to no book on the subject in a bibliography of 438 items [Goldstein and Moses]. At the same time, a vigorous new literature on money and capital markets and their role in economic development takes no interest in geographical location or the relationships among financial centers [Goldsmith, McKinnon, Sametz, Shaw]. Apart from a sentence or two, one would think that the money and capital market was spread evenly throughout a given country. Such general analytical literature as I have found goes back to World War I. In a 1912 study, Marco Fanno has a chapter on the centralization process in banking and money markets, including the geographic centralization. A 1915 volume on The Evolution of the Money Market presents an elaborate account of the processes by which congeries of isolated banks were formed into a financial hierarchy centered on London, with liberal use of physiological analogies, including "natural selection" and "survival of the fittest." In his general work on economic history, Gras describes the development of metropolitan economy from town economy and village economy, and specifies that the metropolis adds the function of finance [Gras, chaps v, vi]. His work demonstrates an interest in the functions of and relations among financial centers which is rare in current research.

The problem is of considerable historical interest, and not without relevance to contemporary issues. Historically, for example, explanation is needed why money and capital markets were centered at the capital in Great Britain, France and Germany, but not in Italy, Switzerland, Canada, the United States, Australia, etc. Or one can formulate an aspect of the issue as a riddle: what do the Midlands Bank, the Credit Lyonnais, the Dresdner Bank, the Banca Tiberina, the Bank of Nova Scotia and the First of Boston Corporation have in common? The answer is that their executive offices are located in a different place than that implied by their name - the Midlands Bank in London, the Credit Lyonnais in Paris, the Dresdner Bank in Berlin from 1892 to 1945, the Banca Tiberina (after 1879) in Turin, not along the Tiber, the Bank of Nova Scotia in Toronto, and the First of Boston Corporation in New York. The two historical curiosities can be combined: a year after the Midlands Bank transferred its headquarters from Birmingham to London (in 1891), there was a simultaneous movement of the A. Schaffhausen'scher Bankverein from Cologne to Berlin, i.e. from provincial city to the capital, and of the Eidgenössische Bank from Berne, the capital, to Zurich. The affinity of finance and locations is underlined by the fact that so many banks have places, rather than functions (Merchants, Farmers, etc.) in their names. (For private banks where confidence is all-important banks are named for people.)

Contemporary relevance is provided partly by the tasks of building money and capital markets in developing countries, which McKinnon and Shaw regard as vital to economic development and more important than foreign aid or export expansion. Of interest to the writer is the question of predicting which center, if any, will emerge as the leading money and capital market

of the European Economic Community if its monetary integration is achieved. For the purposes of such prediction it is necessary to have a model of the formation of financial centers.

In the pages that follow a comparative analysis is presented in literary rather than statistical or econometric form. It is perhaps unnecessary to defend the comparative method after having shown that the administrative capital sometimes serves as the financial center, and sometimes does not. I go further, however, and suggest that the study of single cases, valuable as it is, frequently tempts the economic historian to rely too heavily on single analytical models, and that the comparative method, for limited problems at least, is of value in showing what in historic process is general and what special. The qualification that the comparative method is most effective with limited problems - as a rule of a partial-equilibrium sort - reflects scepticism that general-equilibrium issues like business cycles, stages of growth, and backwardness embody too many degrees of freedom as one moves from one to another country, society, polity and economy to enable the analyst to generalize with confidence.

As an aside, let me note the conviction that the comparative method is best pursued by dealing with broadly similar countries rather than those of widely differing cultures, traditions and stages of development and putting the several cases through one head. Useful work is done by assembling different experts on different countries and asking them to follow a single outline. The two volumes edited by Cameron on the role of banking in the early stages of industrialization show this method at its best, with the editor seeking to generalize on the basis of separate studies [Cameron, 1967, 1972]. With multiple authorship, it is possible, of course, to go

wider and deeper. On the other side of the argument, however, I contend that a number of similarities and disparities of analytical interest will be missed with collective authorship, which relate to material examined but not recorded by separate writers. The paper which follows is thus, to an extent, an example of a method which is perhaps more widely applicable, as well as a study of financial markets in themselves.

That the comparative historical account is qualitative rather than quantitative derives from the limitations of the writer, the enormity of the task of rendering the data comparable - both financial data and those for geographic entities, and my interest in process more than outcome. Such an impressive financial study as Goldsmith's Financial Structure and Development shows conclusively that financial machinery becomes more elaborate as a country grows in productive capacity, but it does not examine the detailed processes. To extend this study from the qualitative to the quantitative - a highly desirable goal - would make it unduly long.

The section which follows briefly reviews the literature on the location of metropolitan cities, their functions, the roles of money and capital markets in the development process, and the evolution of banks and banking. In what follows banks and banking are central with little explicit attention to other elements of money and capital markets. There will be some reference to clearing houses, stock exchanges, government security markets, mortgages, foreign bonds and insurance, though none to factoring, consumer finance, pension funds, and other sections of the market. With growth, the importance of banks as financial intermediaries diminishes relative to other institutions, but it is always strategic. The next section also attempts to indicate the benefits of centralization of money

and capital markets, and the limits to those benefits beyond which new financial centers tend to be created rather than the old enlarged.

After section II, there follows a series of case studies on the centralization process. Sections III, IV and V deal with Britain, France and Germany, where the capital became the financial center. The contrast between the British and French cases on the one hand, and the German on the other, is furnished, of course, by their respective political histories and late unification of Germany in 1870. Sections VI and VII deal with the Italian and Swiss examples, both with late unification in 1848 and 1860 respectively, where the financial center turns out to be altogether different from the political capital. Canada and the United States come next in sections VIII and IX, where again Ottawa and Washington are not financial centers. The Canadian experience is particularly of interest as the country freed itself successively to a considerable degree from money-market reliance on London and New York - a decentralization process - experienced an incomplete shift from an established financial center, Montreal, to a new one, Toronto, and has recently begun to develop a relatively independent market in Vancouver. Section X treats cursorily the changes of the world financial center from London to New York, and from New York to the Euro-currency market. A concluding section XI summarizes the evidence and seeks to indicate its usefulness in forecasting the evolution of a European financial center.

II. Banking Development and the Metropolis

A recent spate of books has thrown new light on the role of banking in economic development. Two of the earliest writers in the field were Hoselitz and Gerschenkron who emphasized especially the role of the Credit Mobilier in

1852 in France in stimulating rapid industrial expansion. German banking was said to be as powerful as the steam engine [Gerschenkron, 137]. These leads were followed up and developed by Cameron, both in his book on France and the case studies he edited [Cameron, 1956, 1967, 1972]. Some of these cases, particularly those on Austria, Italy and Spain, suggested that banking may or may not make a positive contribution to economic development, depending not on personal qualities of the bankers but on the "structural characteristics of the system, and the laws, regulations and customs" [Cameron, 1972]. The contribution of the Credit Mobilier to the industrial development of France has also been downgraded [Fohlen, 37]; its interests, and those of many of its imitators, lay in speculation, not in industrial growth. This historical literature, moreover, focussed on banking as an agent of growth through stimulating demand.

The analytical contributions of Goldsmith, McKinnon and Shaw emphasize the role of banking in mobilizing and allocating liquid resources. The development of financial intermediaries "accelerates economic growth and improves economic performance to the extent that it facilitates the migration of funds to the best user, i.e. to the place in the economic system where the funds will find the highest social return" [Goldsmith, 400]. Shaw equates "deep" with liberalized finance which opens the way to superior allocations of savings by widening and diversifying the financial markets on which investment opportunities compete for the savings flow. In the only reference in his book to space, he goes on: "The market for savings is extended....Local capital markets can be integrated into a common market, and new opportunities for pooling savings and specializing in investment are created" [Shaw, 10]. McKinnon's emphasis is on raising the rate of interest on financial capital

to that on real capital so as to make it worth while for entrepreneurs to save in money form for later investment. The availability of external finance enables entrepreneurs who would otherwise be limited to their own savings to start businesses sooner, and on a larger scale. Finance of trade and of production at a rate of interest equal to the return on real assets is a shot in the arm to development. Integration of capital markets eliminates local and sectoral monopoly and monopsony, but especially stimulates formation of savings and its pooling [Shaw, passim]. Here is an echo of Powell's reference to banking as a "magnet which pulls out hoards" [Powell, 274].

These discussions of banking innovation and financial intermediation or deepening lack, as has been said, a spatial dimension. Financial centers are needed not only to balance the savings and investments of individual entrepreneurs through time, and to transfer finance capital from savers to investors, but to effect payments and transfer savings over distance. Banking and financial centers perform a medium-of-exchange function and an interspatial store-of-value function, in addition to the general store-of-value function for savers and allocator of investment among entrepreneurs. Single payments between separate points in a country are efficiently made through a center, and both seasonal and long-run surpluses and deficits of financial savings are best matched in a center. The specialized functions of international payments and foreign lending or borrowing are typically best performed by one central place which is also the specialized center for domestic interregional payments. It need not be: for the twenty years after Berlin became the undisputed center of Germany for domestic finance, Hamburg continued its role as the leading city for foreign-trade finance.

To limit ourselves to domestic interregional payments, the efficiency of a single center is akin to the contribution to utility in the choice of a single numeraire. Each locality deals not with each other locality in making and receiving payments, but with a single center. $N-1$ conduits are needed instead of $\frac{N(N-1)}{2}$. Small localities are typically clustered about a provincial financial center but are linked to others through the central financial market. At the time of the establishment of country clearing in London in 1858, the National Provincial Bank regarded the idea of a bank at Manchester collecting a check on Newcastle-on-Tyne through London as "preposterous" [Taylor, 229]. At that time the National Provincial Bank had offices in Manchester and Newcastle whereas its banking office in London was begun only in 1866. Later it seems evident that the National Provincial Bank would clear among its branches through a central point, such as London. French centralization of distribution through Paris has been criticized for such purposes as moving artichokes from Dijon to Bordeaux; the efficiency of central clearing obviously declines as costs of transport rise. But for money payments there can be no doubt that a central financial market, as the apex of a national system, and a single international market, as the apex of national financial centers, are efficient. An African student at a lecture once complained to me that Latin American payments to such a country as Kenya were made in dollar checks on New York and was persuaded that the system was devised to enable imperialist extortionists to exploit the periphery. He found incredulous the truth that such centralization of payments and the use of a vehicle currency are efficient.

The origins of banking are diverse. Elementary textbooks imply that they mainly originated in the storage functions of goldsmiths, but this is

oversimplification. The goldsmiths in England, congregated in London, were an important source of private banking but by no means as important as merchant houses. Other bankers came from such occupations as scribes or notaries; tax receivers or tax farmers, who lent out funds held awaiting remittance to the Treasury; court bankers who provided advances and personal services to profligate princes; industrial companies which paid wages in tokens, as a stage of development beyond the truck system (payments in commodities), and found that they survived in circulation. Some manufacturers used profits in business to lend out rather than to plough back in industrial expansion. But the bulk of bankers started as merchants, and gradually became specialized in the financial side of commerce. Ten of 14 private bankers in Liverpool - a commercial city, to be sure - sprang from wholesale houses [Pressnell, 49]. Often a merchant devised a system for making or collecting payments at a distance and was asked to perform such services for others. The Bank of England was started during the Nine Years War by wine merchants who found themselves with capital as they liquidated their capital, but no opportunity to replace it with real assets. Beer also involved capital accumulation which in a number of instances led the brewer into banking. The link between commerce and banking is a close one, and banking as well as commerce involves the overcoming of distance.

The geographical pattern of banking is linked to commerce. Cities are typically located at a break in transport, and such a break must lie across a trade route [Duncan et al, 39]. London, Paris, Cologne, Rome, Montreal lie on the first ford or shallow part of major rivers up from the sea. Berlin lay at the point of transshipment of bulk cargos moving from the Oder to the Elbe [Henning, passim]. Lyons and Frankfurt were historic fair towns

on international caravan trails and the furt in Frankfurt stands for ford - the ford of the Franks on the river Main. As we shall see, the coming of the railroad, a major innovation in transport in the 19th century, changed the character of banking and the location of some financial centers, and only timely action by other communities to influence the shape of the railroad network prevented other adverse changes.

Not all commodities are identical in their impact on transport or the location of financial activity. It is possible to construct a "staple theory" of finance, at least for the early stages of banking development, to explain the different impact of different commodities on the size and pattern of financial flows. Seasonality of financial requirement is one aspect; production processes, need for bought inputs, time needed to consume outputs are others. Ports are dominated by particular commodities financed in certain ways, which affects their financial development: Liverpool by cotton and wheat, Glasgow slaves and tobacco, Cherbourg cotton, Bremen cotton and coffee (financed in London) etc.

The mechanism by which urban location, the transport network, the economic characteristics of goods and services in which an area specialized were transformed into an evolving financial pattern was partly Darwinian, partly the result of deliberate action by private individuals or government. Darwinian evolution of the banking pattern was abetted by business cycles which wiped out badly located banks and bankers in depression, as well as the well-located who were incautious. State policy is reflected in such action as the centralizing policies of the Bank of France and the French government which wiped out in 1848 the provincial banks established during the 1830s and the decentralizing pressures in Canada and the United States.

The strength of regional banking in France in the period before World War I was in spite of, not owing to state action which typically at that time operated to discourage regional autonomy. At the private level, local action fosters means of transport and opposes other financial centers, and especially, of great interest, banks, bankers, corporation head offices and the like deliberately changed locations, often with face-saving action to profess loyalty to their birthplace. Goldstein and Moses describe a game-theoretic model of location decisions under uncertainty by Webber, with one assumption that "once the firm is located, it is impossible to relocate" [Goldstein and Moses, 485 note 40]. As will be evident later, such an assumption lacks historical validity for banks.

Some allowance must also be made for pure accident. I am informed by Juan Linz that Bilbao flourishes in Spain as the second financial center outside of Madrid because the Socialist Finance Minister Prieto came from that region and saved its banks, allowing those of Barcelona to fail. The history of European and North American banking is filled with accounts of bankers' quarrels based on personal, social, political and religious differences, which may or may not be superficial rationalizations of deep-seated economic forces.

On a staple-theory showing, banking starts out to serve the needs of sovereigns and nobles, develops in connection with commerce, then governmental finance less personally, next transport, including shipping, canals, turnpikes and railroads, then industry, and finally intermediation in insurance, mortgages, consumer finance, factoring, pension funds, and the like. The money market in a broad sense in a highly developed setting like New York or London includes a money market, with many specialized segments such

as commercial paper, acceptances, collateral loans, treasury bills, federal funds (in New York), certificates of indebtedness, etc; a capital market, private and governmental and including new issues and secondary distribution, commodity trading, foreign exchange trading, bullion trading (in London, Paris, Zurich), and to a lesser degree ships and ship carters, and insurance [Madden and Nadler, 110]. The borrowing and lending pattern starts locally and extends to a national center, with perhaps intermediate regional stops, finally becoming international. Specialization grows both in instruments, functions and by hierarchical market. Inflations, depressions, wars, and the like distort the pattern or intensify it.

The hierarchical character of financial specialization was originally discussed by an economic historian, N.S.B. Gras, who developed a theory of stages of metropolitan development in which finance was the apex. There is a national credit market in a country, but it is spatially concentrated in a hierarchical pattern. The metropolis grows to serve a hinterland through four phases: 1) commerce; 2) industry; 3) transport; 4) finance [Duncan, 84]. Finance was more concentrated than commerce, industry or residence. In 1929 four counties had one-quarter of the savings deposits in the United States - a poor measure of financial concentration - compared with 11 counties for one-quarter of retail sales, and 27 counties for one-fourth of the population [McKenzie, 62]. In 1955 New York had \$4,400,000,000 of non-local loans to \$1,200,000,000 for Chicago and \$490,000,000 for San Francisco - another measure of metropolitan character [Duncan et al, 117]. Similar data for Canada in the 1960s are given below. An indication that regional economists and geographers outside of Canada and France ignore finance is that a recent study of urban growth in the United States deals exclusively with commerce

and industry, making no mention of banking or financial markets [Pred, passim]. Only the study of the New York metropolitan area led by Vernon devotes attention to it.

Cities, according to Vernon, attract those industries or services where there is great uncertainty and need for face-to-face contact [Vernon, 70, 73]. Speed of interaction is a requisite; unstandardized outputs lead to agglomeration as a convenience for the shopper. The port of New York attracted the wholesalers, who pulled in the financial institutions, which attracted the central offices of national corporations [ibid., 80]. A detailed study of financial functions of New York supports this view and discusses the external economies in a metropolitan financial center from specialization, joint facilities, and services of other industries such as printing [Robbins and Terleckyj, 38]. Shopping convenience is mentioned, but perhaps too little is made of the fact that the broader the financial market, the greater the liquidity of security issues, with the result that lenders and borrowers from other regions will transfer there gross, and not just the net of their excess demand or excess supply. The borrower pays a lower rate of interest and/or is able to issue a larger loan. The lender acquires a qualitatively different investment because of the fact that it is traded on a broader secondary market which is why he is willing and often eager to accept a lower interest rate [Kindleberger, 1963, 191-92]. Insurance companies are less centralized than most other segments of the money and capital market because of a pronounced preference in the United States of consumers for locally-issued insurance policies [Robbins and Terleckyj, Chapter 6].

In addition to economies, there are diseconomies which work against

centralization and favor regional markets. The foremost is cost of information, which gives local credit markets an advantage in familiarity in dealing with small firms in an area. Lack of knowledge of local personalities and character may inhibit central money and capital markets from lending locally. Another diseconomy which has supported the growth of North American markets vis-a-vis European, later the Euro-currency market against New York, and the West Coast of North America against Toronto-Montreal and New York is the difference in time. Direct communication by telephone or telex must be contemporaneous, and over many time zones involves a dislocation of the working day of at least one party. This is another specific illustration of the cost of dealing in finance at a distance of which the foremost is the loss of information exchanged without face-to-face contact. Still a third diseconomy is crowding, which made for the building of hundreds of offices in mid-town Manhattan after World War II, and induced at least one bank, The First National City Bank, to move its head office from down- to mid-town Manhattan. The phenomenon had been evident in London, with a

banking community in the West End of London, separate from the City, for the convenience of rich clients in Mayfair. The London and Westminster Bank formed in 1836 communicated through its name that it was one of the few banks which operated in both the City and the West End.

Not a diseconomy so much as a discrimination is the tendency of governments and private persons to favor their own compatriots at the expense of foreigners, even at some cost in higher cost or lower profit - an implicit or explicit mercantilist attitude.

Up to a certain high degree of concentration, positive externalities and economies of scale appear to outweigh diseconomies and favor centralization.

Continuous reduction in costs of transport and communication, and their increased ease, over the last 200 years favored the formation of a single world financial market.

III. London as the Financial Center of England

Prior to about 1750, there was little country banking in England. Substantial incorporated banks existed in Scotland, and the Bank of England established in 1694 plus many private bankers existed in London. The Bank of England had a monopoly of joint-stock banking in England; private banks were allowed to issue notes, but could have no more than 6 partners, which limited their size.

Beginning about 1750, there was an upsurge of banks in the country. The dozen or so of 1750 doubled by 1772, reached 400 by 1800 [Bisschop, 150, 163]. Those with large families or trusted relatives tended to establish a separate firm in the City in addition to one in the country. Thus the four Baring brothers whose father had arrived from Germany in Exeter as a wool and serge merchant and went into banking, in 1717, fifty years later divided up - two in London and two in Exeter [Wechsberg, 102]; and Abel Smith, II, the son of the tax-receiver Thomas Smith who remitted funds to London through his connections as a mercer with goldsmith bankers, started a Nottinghamshire bank in 1757, one in London in 1758, a Lincoln bank in 1775 and a bank at Hull - for the Russian trade - in 1784 [Leighton-Boyce, 20]. Much of the activity of these banks was remittance. Landlords living in London received their rent twice a year in May and November, so that the banks were called upon at these times for London bills [Bisschop, 156]. In addition in prosperous times country banks accumulated deposits which they remitted to London for investment. Testifying before the Bullion

Committee in 1810, Mr. Richardson, a bill broker said,

"in some parts of the country there is little circulation of bills drawn on London, as in Norfolk, Essex, Sussex, etc...

I receive bills to a considerable extent from Lancashire in particular, and remit them to Norfolk &c where the bankers have large lodgments and much money to advance on bills of discount" [Bagehot, 138]

Bagehot added in 1873 that the distribution of the customers of the bill-brokers remained much the same after 60 years [ibid., 140], while his own text speaks of funds from agricultural counties such as Somersetshire and Hampshire, with good land but no manufactures or trade, being invested in the discount of bills from Yorkshire and Lancashire [ibid., 6].

The numerous country banks were hard hit by the deflation following the Napoleon War and generated a campaign, largely led by Thomas Joplin, a timber merchant from Newcastle, for adoption of the Scottish system of joint-stock (incorporated) banking with branches. The panic of 1825 in which many small country banks disappeared led to the adoption of joint-stock banking in 1826, but with the privilege of note issue reserved to the Bank of England within a radius of 65 miles from London. The Bank sought to provide an element of stability for the country banks by opening branches outside the 65-mile area. With the renewal of the Bank's charter in 1833, further legislation was required. This was interpreted, against the wishes of the Bank of England, as permitting joint-stock banks of deposit, if not joint-stock banks of note issue, within 65 miles. The result was the establishment of banks with the right of note issue outside the radius. Inside the area, a few banks were started, as note issue was

deemed the principal source of profit. The outstanding one, which survives today, is the London and Westminster.

The other four of the five great joint stock banks of 1967, reduced to four by the merger of the National Provincial with the London and Westminster in 1968, were originally provincial. Lloyds started as a private bank in 1765, an offshoot of a successful Birmingham Quaker metal trader. Members of the family set up a London firm in 1770, although the last partner of both London and Birmingham houses died in 1807. The Birmingham bank remained private until 1865 when it began a series of mergers and amalgamations which converted it from a provincial to a City and national institution. Mergers of 1884 with two private banks, Messrs Barnett, Hoares, Hambury and Lloyd, and Bosanquet, Salt and Company brought the bank effectively to London. The head office remained in Birmingham, but the center of gravity rapidly shifted to London [Sayers, 1957, 35]. The general manager from 1871 to 1902, Howard Lloyd, went to London from Birmingham once a week; his successor made it his business to concentrate all the Head Office in London [*ibid.*, 50]. From 1899 the Board met alternatively in Birmingham and London, and by 1910, the Board ceased to meet anywhere else than London [*ibid.*, 272].

The need to acquire branches, and to establish the bank in London came from difficulties in balancing demands and supply for investments. In 1866 a shareholder was opposed to branching but the chairman pointed to the need to attract funds [*ibid.*, 237]. As this movement grew and banks in areas of surplus funds were acquired, the opposite necessity to find an outlet in London became imperative - a process of unbalanced growth. "A main attraction for joining Lombard Street was the prospect

for fuller and more remunerative employment of surplus cash" [ibid., 269]. Integration of the national capital market can be seen in the tension caused by the original practice of paying 2 1/2 percent on deposits in Birmingham and in Lombard Street a rate which varied with bank rate. When the latter rose above 4 percent some depositors were tempted to move cash to London. This tendency existed before amalgamation with the London banks but became accentuated thereafter. Only much later, when a 7 percent bank rate in 1920 had made the Town rate apply far out into the country, was the problem resolved by establishing a single deposit rate for the entire bank [ibid., 165, 270].

References to the ability and willingness of depositors to move funds between the provinces and London are found elsewhere in Sayers' account of Lloyds [ibid., 110] for Birmingham, and Leighton-Boyce on Nottingham [36].

The history of Midlands Bank is highly similar to that of Lloyds. It started early as a joint-stock bank, in 1836, but moved slowly acquiring only six branches, all near Birmingham in the next 50 years. By 1889 it had absorbed eight provincial banks, including substantial ones in Lancashire and Wales. At this point the Birmingham Banking Company, like it a smaller rival of Lloyds, followed Lloyds' example in acquiring a London connection [Crick and Wadsworth, 311]. Like defensive investment among multi-national corporations who follow the leader to prevent it from stealing a march, the Midlands Bank merged with the Central Bank of London in the same year. So as not to offend Birmingham, it was stated that the London bank imposed among conditions "a sine qua non that the head office must be in London, and half-yearly meetings of stockholders in January in Birmingham and July in London." The Baring crisis of 1890 sped the process of amalgamation

when Lord Goschen, the Chancellor of the Exchequer, shocked the banks by calling their reserves inadequate. By October 1898 the business of the Midland was judged ill-balanced: "Our country business is out of all proportion to our Metropolitan business," and the head office is too small. This was corrected by merger with the City Bank of London [Crick and Wadsworth, 312, 316]. The bank's biographers regard the process as the outcome of an irresistible trend in English banking; Surrey and Kent and the suburbs of London - not the agricultural counties this time - lend surplus funds to the industrial areas of the Midlands and the West Riding (Yorkshire). The head office is the channel through which resources flow far more efficiently than under the old agency and bill system [*ibid*, 329, 342]. There is danger for local banks which become absorbed in separate industries: Bradford in wool, Oldham in cotton, Sheffield in steel [*ibid.*, 345].

The National Provincial Bank and Barclays developed differently. The National Provincial was organized as a joint-stock company in 1833, with £1 million of capital, a board in London, but banking operations in a series of branches only outside the 65 mile limit. Some existing banks were taken over; many were created anew. The geographical spread was wide: Gloucester, Stockton, Darlington, Kingsbridge, Manchester, Ramsgate, Newcastle, Emllyn, etc. "In those days of slow communication and transport, it must have required no ordinary courage...in an era of political and industrial unrest and wild speculative fever, to open for business, and to establish liabilities in places as remote as Darlington in the north and Exeter in the west" [Withers, 61, 62]. The provincial banks were given a certain amount of local government but were under the general management

of London. In 1866, when the bank had 122 offices, it opened for business in London. This involved giving up the right of note issue.

The calculations which led to the decision to exchange the right of note issue amounting to nearly £450,000 for banking operations in London have not been made explicit. The rise of railroad communication, development of London clearing and, since the Bank Act of 1844, spread of payment by check rather than notes, plus the development of limited liability for bank as well as other shareholders in 1857 and 1862, may all have played a role. In 1858, the National Provincial was opposed to clearing in London and the substitution of cheques for Country Banker drafts and notes [Taylor, 229]. By 1865 it found the trends irresistible. If the testimony of other banking histories is applicable, there was also probably a surplus of funds generated in the branch network on which London agency banks were earning profits which could be appropriated by undertaking such investment itself. It would be interesting to know whether the decision was influenced by the possibility of improving intra-bank settlements in London.

The last of the giant joint-stock banks, Barclays, was created in 1896 from an amalgamation of twenty private banks then doing business in various parts of England, with histories stretching back many generations. The three largest were Barclay, Bevan, Tritton, Ransom, Bouverie & Co of London, itself a merger of a City and a West End bank; Gurney and Co. of Norwich and Jonathan Backhouse of Darlington. In all seven of the 20 original banks were firms in which there were Gurney interests. The merger combined a valuable London business with strong connections in the Eastern counties, the Southwest and the Northwest [Matthews and Tuke, 1-9]. Amalgamation reflected the view that the day of the private general banker

was ending and that national networks made both for efficiency in payments and protected the banker from undue dependence on other banks for funds or outlets. In particular country banks with considerable surpluses of funds to invest required assured outlets, partly in the industrial counties but partly abroad. Such a division could only be made in a central capital market, with the net excess of each branch banking network made available for lending abroad through the discount market and the stock exchange.

In concluding the discussion of the United Kingdom, it is hardly necessary to explain how London became the metropolitan apex of the financial network. Whether with the correspondent system, with Bank of England branches in the provinces, with nationally spread joint-stock banks with their head offices in the same place, the system had no choice but London. An ancient banking tradition, a major port, the capital seat, the hub of the railroad network built after 1830, all forces were brought to bear on the single locality, itself with a minor ambivalence between the City and the West End. The Irish and Scottish different banking systems reached across their boundaries and linked up with London.

The country was sufficiently small after the railroad, so that London was accessible from all parts. Howard Lloyd went to London from Birmingham one day a week from 1884 to 1902, as noted, and after his retirement in that year, attended a weekly board meeting from his country place until his death in 1920 [Sayers, 1957, 50]. One partner of Smiths in 1899, spent three days a week at Nottingham and one each at London, Newark and Mansfield [Leighton-Boyce, 279].

London was not the only port, and much banking business had been conducted with foreign parts through Liverpool, the cotton and grain port, and

through Glasgow and Dundee, which specialized respectively in tobacco, and jute. The centralization process was through failure, merger and a change of headquarters. Three American banks - the so-called W-banks, Wiggins, Wildes and Wilson - failed in the crisis of 1837 [Hidy, 84], and the Bank of Liverpool did not survive the crisis of 1857. The Royal Bank of Liverpool failed in 1847 and stopped payment a second time in 1867. W. & J. Brown & Co. which remained afloat in 1837, added British capital and opened a London branch during the Civil War when cotton was scarce, and closed down the Liverpool operation in 1889. Other Liverpool banks were absorbed at the end of the century, like the Liverpool Union Bank taken over by Lloyds in 1900. The takeover required courage, Sayers states [1957, 261], as Liverpool valued its independence. When Lloyds tried to absorb the Manchester and Liverpool District Bank in 1903 there was an outcry. The Manchester Guardian protested that the "strongest, best conducted and most prosperous of the so-called country banks should not lose its identity." [ibid., 263]. Financing was separated from the handling of commodities, and concentrated away from the port of entry. Henry Bell, who became general manager of Lloyds in 1913 had started his banking career in a private bank in Liverpool, and worked for a time with the Liverpool Union Bank where he gained experience in the financing of cotton, corn, timber and provisions. When the Liverpool Union was taken over by Lloyds, he shortly was transferred to the Head Office in Birmingham, and in 1903 to manage the City Office in Lombard Street. There he turned his Liverpool experience in commodity finance to such good account that he ended up as General Manager of the entire Lloyds Bank [ibid., 79-80]. Successful men, management and techniques all converge in the center.

Two of the smaller national joint-stock banks today maintain head offices in Lancashire, but large London offices. The District Bank, originally the Manchester and Liverpool District Bank, is the only joint-stock bank of 34 represented in 124 places existing in 1833 which survived without losing its identity through amalgamation. It achieved national status and shortened its name to District Bank. The Bank of Liverpool similarly went in for national status and achieved it as Martin's Bank. Originally started as an offshoot of W. and J. Brown & Co., it felt a strong need for joining the London Clearing House. As it had acquired local provincial banks through mergers, it permitted the acquisitions to retain their original London agents, and by 1918 was dealing with five private London bankers. It then merged with Martin's Bank as the Bank of Liverpool and Martins, Ltd, with a head office in Liverpool but a separate board in London. In 1928 on the occasion of a new merger, and after the death of Sir James Hope Simpson who had engineered the 1918 amalgamation, it abbreviated its name to Martin's Bank [Chandler, Vol. I, 420ff].

As they became national, various banks experimented with various degrees of uniformity of practice and decentralization [Sayers, 58, 232; Leighton-Boyce, 279]. In the end, "the principal characteristic of the British money market is the decentralization of granting credit, while at the same time the various banking institutions are closely connected by the placing of their actual reserve in the hands of one note-issuing bank" [Bisschop, 217].

The coiner of physical images, Powell, quoted the 1858 Select Committee on the tendency of deposits to gravitate to London, the center of commercial activity, adding "The expression 'gravitates' is singularly felicitous, though it is possible that the Committee did not realize how

rapidly the mechanism of the Money Market was being modelled on the lines of the Solar system" [Powell, 370 372].

IV. Paris in France

The development of banking in France differed sharply from that in England. Centralization had been a feature of French life since the time of Louis XIV, but the French revolution scattered the banking forces back to their origins in Geneva or Germany, or overseas. With peace, these merchant banks returned to Paris, began to slough off speculation in merchandise and to open subsidiaries in ports such Le Havre to finance imports of cotton [Lévy-Leboyer, 436-37]. Apart from ports, the development of a national credit market was slow. Emile Pereire wrote in 1834 that there were no banks outside of Paris, in contrast with England which had five or six hundred [Bigo, 21]. The disconnected character of money and capital markets is illustrated by the fact that Dijon paid 9 or 10 percent when Paris paid 4 percent for discounts, and Lyon as little as 3 percent [Gille, 57, 77]. Lyon, however, found money tight each spring when it paid for silk from Italy. The seasonal tightness applied to all of rural France which shipped funds to Paris in the first half of the year, and got it back with the harvest after August [Bigo, 101].

Napoleon who established the Bank of France at the turn of the century was concerned to unify the national credit system by establishing its subsidiaries in the provinces to improve the circulation of specie and drafts. With the Restoration, the Bank of France abandoned this policy on two grounds: the difficulty in finding local buyers of Bank of France stock needed to qualify as regents of the provincial comptoirs, and the scarcity of three-name paper, which is all it would rediscount. The

alternative was to establish regional banks to mobilize local savings more effectively. Such banks got off to a good start in Rouen, Nantes and Bordeaux - all ports - and others were begun in the 1830s in Le Havre, Lille, Lyon, Marseilles, and Dijon, but under restrictions. The Bank of France decided that it needed monopoly of the note issue, and limited the regional banks in the paper they could discount, the size of the notes they could issue, and the possibility of redeeming notes in Paris [Gille, 1-101]. In the financial crisis of 1848, the Bank of France allowed the regional banks to fail so as to take over the note issue, and returned to a program of *comptoirs*.

One of the fundamental reasons for developing local institutions was the fear that the Bank of France in a crisis would order the provinces to restrict credit in ways which took no account of local conditions [*ibid.*, 24]. Note that the Bank of Wales prior to its merger with the Midlands had little trouble in the crises of 1857 and 1866 largely because its business was predominantly Welsh [Crick and Wadsworth, 188]. On the other hand, the Northumberland and Durham Bank failed in 1857, whether because it had almost £1 million of its £2.5 million assets in a loan to a single company, Derwent & Co. which was working mineral rights owned by the bank's Jonathan Ricardson, as one story has it [Gregory, 184], or because the £250,000 of small bills on Newcastle shopkeepers, probably good in themselves, were not discountable outside of Newcastle [Powell, 286]. Integration is good in good times; in bad times, it is good if you have the trouble and the rest of the world helps, bad if the trouble originates outside and is communicated inward.

With a fractured national market, some localities experience unique

conditions owing to specialized foreign relations. While Paris served as an intermediary between sources of capital such as Vienna, Frankfurt, Strasbourg and Basle and outlets in Rouen, Saint-Quentin, Ghent, etc. Lyons had its special connection with Geneva, Mulhouse with Basle [Lévy-Leboyer, 429]. Marseilles was continuously bled for specie by Spain, Corsica, Algiers or the Black Sea [Gille, 67-68].

With the foundation of the Credit Mobilier and the large credit banks - the Crédit Lyonnais, Société Générale, Comptoir d'Escompte, etc. in the 1850s and 1860s, the money and capital market of France became better interconnected, but with the passage of time, no less centralized. The Crédit Mobilier and the Société Générale were started in Paris and undertook large-scale lending for railroads, ports and other public works, but not local industrial activity. Established in the silk capital at the entrepot center for foreign trade to Switzerland and Italy, the Crédit Lyonnais spread out a network of branches - first in the Languedoc, and then throughout the country, to draw funds not to Lyons but to Paris. The history of the bank is discussed in detail in two books, an account of the years from 1863 to 1882 by Bouvier, and one of the few studies of credit networks by a geographer, by Labasse.

Bouvier follows the move of the bank from Lyons to Paris with great precision. Started by Henri Germain, son of a silk manufacturer, who received a substantial dowry from his wife, from another silk family, its early investments were industrial and regional, and most were in difficulty by 1870. In some cases, such as the widely-discussed La Fuchsine, a synthetic dye, the difficulties of the firm were intensified by the greed of the bank in seeking quick profit rather than careful development. Mme.

Germain died in 1867, and M. Germain remarried in 1869, to a Paris lady. He was elected to the Chamber of Deputies which required his presence in Paris. Bit by bit he spent a greater proportion of his time in Paris. In 1881 he failed to visit the head office once during the year, and the head office was actually shifted in 1882. Already by 1879 the head of the subagency at Bezier asked whether he could not deal directly with Paris rather than going through Lyons.

In 1871, the bank made very large profits in the Thiers rente. From then on, its task was to collect savings from all France, but especially from the Lyons hinterland, to funnel to Paris for investment in foreign bonds. "Drainage" (with a French pronunciation) was the function of the branch network, the accumulation of deposits. Towns like Grenoble, Annecy, Creusot and so on which had thriving industry and building and needed loans were to be avoided. Loans were provided to commerce, the fruitgrower, cattle feeder and the abbatoir, but not to industrialists. The Minister of Finance made the same objection in relation to Lille in 1835: "It is rare that banks adapt to and prosper in cities of factories. There is little hope of keeping the notes of the bank in circulation for very long [Gille, 36].

The change in the personal interests of Henri Germain from Lyons to Paris are of course symptomatic rather than causal. The decline in silk growing in the Lyons area reduced the demand for finance, and left Lyons "a gold mine for savings." Germain and the hautes banquiers of Paris, Geneva and Italy who started the bank with him were interested only in large and established industry as was true of Paris banking generally. Where such loans were not available, foreign loans served instead.

Little change in this process was produced by the rise of the so-called

industrial banks, or banques d'affaires, founded in the 1870s. Most disappeared in the depression or the crash of 1882 which engulfed the Union générale. Those that survived did so on the basis of hoarding their profits on the Thiers rente. From 1896, with recovery, moreover, their investments were highly similar to those of the deposit banks, in foreign bonds and established companies.

In this circumstance, the demand for local credit had to be fulfilled locally in regional credit markets which sprang up in competition with the national market. In 1910 and again in 1929, small regional banks which have not merged with or been driven under by the large Paris-led firms have organized to resist the domination of the center. In 1910 the Syndicat central des banques de province met at Bordeaux with 400 members [Brocard, 106]. In 1929, the Crédit Industriel et Commercial in cooperation with several other institutions organized the Unions des Banques Regionales pour le Crédit Industriel [Madden and Nadler, 327]. The movement flourished particularly in the Nord, in Lorraine, and in Haute Savoie.

In the Nord, the Crédit du Nord emerged as one of the strongest of the regional banks in France. With its head office in Lille in 1848, it established a few branches - Armentières 1878, Tourcoing 1884, and Paris 1889, before expanding more rapidly following 1894 [Centenaire]. It is of particular interest that it remained a regional bank and did not move its head office to Paris. Other vital regional capital markets in Lorraine and Haute Savoie, undertook to finance the expansion of Briey iron ore after 1870 and the development of hydro-electric power generation, aluminum and other electric metallurgical and electric-chemical industry [Buffet, Charpenay, passim]. The Charpenay bank failed in 1931 not receiving assistance from

the Bank of France. A well-known writer on French banking has accused the Bank of France of fostering greater centralization in the 20th century by actively competing with the regional banks for local paper [Dauphin-Meunier, 165-66]. The small regional banks were able to compete with the national institutions because their deposits were mostly at term, as opposed to sight, and they were able to maintain much lower reserve ratios, in some cases as low as 3 to 4 percent against 12 percent or so for the larger banks [Fanno, 74].

Beyond the private and deposit banks, centralization of the capital market in France is accentuated by government institutions, the Bank of France, of course, but also such national institutions as the *Crédit foncier* (1852), *Crédit agricole* (1860), *Caisses d'Epargne* (1881) and its successor *Caisse de Dépôts et de Consignations*. To this day savings banks do not invest locally, as in the United States, but pour their funds to Paris, where they are administered by a single decision-making unit, most recently as an adjunct to the planning process.

The choice of Paris over other central locations need not be explained. Tradition, administrative centralization, the communication network laid out in a star with Paris as the center, all attest to the pull of the capital. Apart from the regional banks, there was no resistance to the centripetal force. By 1900 the Lyon bourse had been left behind and was characterized as a museum piece, despite some pick-up during the German occupation of France in 1940-42 when it was in the unoccupied zone [Labasse, 446]. After World War II, the movement continued, with the transfer to Paris in the single year 1950, of the head offices of three major Lyons companies, including the *Comptoir de Textile Artificiel* whose president continued to

live in Lyons but to work in Paris during the week [ibid., 493, 500].

The movement of international (largely) American companies to France in the 1950s and 1960s accentuated the trend, and finally elicited a program to move industry and head offices out of Paris to the provinces.

V. Berlin in Germany

The emergence of a single financial center in Germany has taken place twice, both connected with war: first, in the rise of dominance of Berlin over Cologne, Frankfurt, Darmstadt, Dresden, Leipzig and Hamburg after the victory of Prussia over France in 1871; and second, in the gradual emergence of Frankfurt as the financial capital of West Germany, following the isolation of Berlin at the end of World War II. In both instances, the process is partly political and partly economic.

Prior to 1870, Germany was made up of at least 30 principalities, republics, kingdoms, varying in size from cities like Frankfurt and Hamburg to the large state of Prussia which encompassed a wide area from Frankfurt north to the sea and then east including East Prussia and Silesia, with its capital at Berlin. Prior to reduction of internal barriers in 1818, the Zollverein in 1834 and the railroad of the 1840s, the constituent elements of Prussia often pursued separate policies because of physical separation. Private banks were local - the Rothschilds in Frankfurt, the Oppenheims in Cologne, Bleichröder and Mendelssohn in Berlin, Heine and Warburg in Hamburg. Beginning with the creation of the Schaffhausenschen Bankverein in 1848 on the ruins of Schaffhausen & Co. which failed, two waves of bank formation took place, in the 1850s up to 1857 and a second wave from 1866 to 1873, from the victory of Prussia over Austria to the onset of the Great Depression, with hardly any pause for the Franco-Prussian war in 1870 [Helfferich, 30].

The Schaffhausen'schen Bankverein permission to create an incorporated bank was granted by the Prussian government in 1848 in a moment of absent-mindedness. It did not last. The bank was refused permission to grow through adding to its capital, and to move to Berlin, which it sought to do in 1853 [Riesser, 509]. Its by-laws did not specifically provide for branches, and the state did not permit their change. Tilly states that Berlin in the 1850s was the ideal place to start a bank, presumably because of its security activity in the finance of railroads although he fails to say why [Tilly, 1966, 115]. To get around the refusal of the Prussian government to permit further incorporated banks, Cologne financiers, led by the Oppenheims and Gustav Mevissen, and with French financial support, started the Bank für Handel und Industrie, known as the Darmstädter Bank, in Darmstadt, Hesse, a few miles from Frankfurt-am-Main where money was plentiful, and outside Prussian jurisdiction. The statutes were for the most part copied from those of the Schaffhausen'scher Bankverein charter of 1848, but went beyond these to include provisions patterned after the Crédit Mobilier of 1852, permitting loans and participations for own account, underwriting, issuance of bonds and powers to effect mergers and consolidations of various companies [Riesser, 56-57; Cameron, 1956]. The Bank quickly opened an agency in Frankfurt and followed that by agencies in other states, in Mainz, Berlin, Heilbronn, Mannheim, Breslau and Leipzig, and considerably later, Hamburg and Stuttgart [Benaerts, 275]. The Frankfurt agency was converted into a branch in 1864.

In 1856 a way was found around the Prussian refusal to grant bank charters, by using the form of Kommanditgesellschaft auf Aktien, a limited partnership with transferable shares. (Compare the British episode of 1833

when joint-stock banks were created in London in competition with the Bank of England by eliminating the note-issue privilege.) Scores of banks were created, among them the conversion of the private bank of Hanseemann, founded in 1851 to the Diskontogesellschaft, the Berliner Handelsgesellschaft, both in Berlin and both with Cologne money, the Norddeutsche Bank and Deutsche Vereinsbank at Hamburg [Tilley, 1966, 115].

The participation of Cologne bankers in operations in Darmstadt and Berlin, and through them throughout the German states raises the question whether there was a national German or at least a Prussian-Saxon money and capital market as early as the 1850s. Cologne had no security market of its own, finding it easier, says Tilly, to use Berlin, Frankfurt, or even Brussels and Paris [*ibid.*, 118]. At this stage, Frankfurt and Berlin specialized in security markets: Frankfurt loaned to princes, towns, foreign states, but not to industry or for railroads [Böhme, 1968, 151-53; 1966, 219]. The thesis of Tilly's study of the Rhineland banks is that German industrialization of the period was achieved not through the careful planning of an efficient state bureaucracy but in "thousands of profit-oriented decisions made by capitalist entrepreneurs operating throughout Prussia" - and especially in the Rhineland [Tilly, 1966, 138]. The implication is that the decisions were decentralized. Karl Marx said of Germany that there was "no Isaac Pereire but hundreds of Mevissens on the top of more Crédit Mobiliers than Germany has princes" [quoted Blumberg, 171]. But Mevissen was himself the president of the Darmstadter Bank, the Luxemburg Bank, Schaffhausen'scher Bankverein, Bank für Süddeutschland, Kölner Privatbank, and the Berlin Handelsgesellschaft, in addition to the presidency of a railroad, and sat on the boards of six mines and two industrial

companies, typically as chairman of the executive committee [ibid., 199-200]. Other Cologne bankers like Hanse^hmann, and Camphausen and Oppenheim, moved freely between banking in Berlin and Cologne and business operations in the Ruhr. Eichborn was a banker in Berlin and an industrialist in Silesia. Private bankers such as Bleichrö^hder and Mendelssohn in Berlin worked alongside the joint-stock banks and corporations, especially in the issuance of securities [Landes, 206]. For Prussia, at least, and excluding Bavaria, Wurtemberg, Baden in the south and the Hansa cities in the north, the banking network solidified rapidly in the 1850s.

Hamburg was different. It clung longer to merchant banking, was later in specializing, than other parts of Germany. Its interests lay in foreign trade, in shipping and in overseas finance rather than domestic railroads and coal and steel. Regarded by the rest of Germany as the "English city," and itself disdainful of Prussian leadership until the successes of 1870, its banking was more closely tied to London than to Berlin.

In 1857 this foreign connection led to almost disaster. The speculative excess in grain produced a crisis which spread from New York to Liverpool to London to Scandinavia and to Hamburg, where a number of private houses could not meet their obligations and ship captains were unwilling to discharge their freight for fear of not being paid. Appeals were made for a silver loan to Rothschild, Baring and Hambro in London, Fould and Napoleon III in Paris, and also to Amsterdam, Copenhagen, Brussels, Dresden, Hannover and Berlin [Böhme, 1968, 254]. Fould who was the father-in-law of Heine, the Hamburg banker, telegraphed back: Your dispatch is not sufficiently clear. The Berlin ambassador indicated that Brück and the Kaiser would not help. At the last minute as an anti-Berlin gesture, the Austrian government sent

a train of 12 million talers of silver, known as the Silberzug, which saved the private banks of Merck, Godeffroy, Donner, John, Berenberg, Gossler & Co. after the discount rate had reached 10 percent [*ibid.*, 266-70; Rosenberg, 128ff]. Shortly thereafter, Hamburg moved to specialized banking and the foundation of joint-stock banks, the Norddeutscher Bank and the Commerz- u. Diskontobank.

With Prussian successes in the 1860s, German banking became increasingly concentrated in Berlin. The defeat of Austria deprived Frankfurt of its counterweight against the power of Prussia, and from having been an Imperial city and a free city, it became in Böhme's expression, a Prussian provincial city. The functions of the Frankfurter bourse in dealing with state loans passed to Berlin [Böhme, 1968, 236]. Among private banks, Bleichroeder, Mendelssohn and Warshauer in Berlin flourished in their security dealings, while Bethmann, Erlanger and Rothschild in Frankfurt found their clientele shrinking [Böhme, 1966, 219]. It seems evident that the ascendancy of Berlin over Frankfurt was political, but there are other explanations: the nimbleness and skill of the Berlin bankers [Helfferich, 27]; the greater importance of railroad issues over those of state entities [Brockhage, 56]. All have a portion of the truth. But Berlin had not made its start specializing exclusively in railroad securities. The Prussian State Bank and the affiliated Seehandlung had undertaken some industrial development finance well before 1840. Nor did Frankfurt monopolize state issues. After the fire of 1842, Hamburg floated a loan of 34.4 million Mark banco through two Berlin and one Hamburg houses. Issued in Berlin, much of the original amount was bought in Hamburg, and all had been repatriated by 1846 [*ibid.*, 208-09]. Berlin was thus a capital market for more than Prussia before 1850.

The foundation of the Reich out of Prussia and the other German states required consolidation of the several monies in circulation with the adoption of the Reichsmark, and the absorption of the several banks of issue into the Preussische Staatsbank, which emerged in 1875 as the Reichsbanks. In the boom which followed immediately after victory, however, there was a splurge of new bank creation, with the founding especially of the Deutsche Bank in Berlin and the Dresdner Bank in Dresden, both in 1872. The Deutsche Bank was started by a group including Adalbert Delbrück and Ludwig Bamberger, the former a private banker, the latter a member of the Zollverein Parliament, an economic expert who had worked in Paris banks during an exile after 1848. The bank's founders wrote to Bismarck in February 1870 indicating their intention to devote the bank to foreign trade. The finance of world foreign trade, outside the United States, was in the hands of the French and British. Georg von Siemens, a cousin of the electrical equipment manufacturer, the general manager, was completely persuaded of the high national purpose of making German trade independent of British credit, and to "fill the gap in finance of external trade" [Helfferich, 31, 38, 41]. The bank was located in Berlin "the importance of which is indicated by the eagerness with which the Frankfurt capital market comes to meet it" [*ibid.*, 34]. It enlisted some Hamburg capital [Wiskemann, 206].

In the event, the Deutsche Bank had little success in foreign finance, and found it impossible to operate in that field from Berlin. Its first operation was to open a branch in London with two Frankfurt banks in March 1871, and then established branches in Bremen and Hamburg in 1871 and 1872 respectively, "because of the difference in foreign exchange in inland and coastal towns, and the rather sharp difference in inner and coastal trading

practices [Helfferich, 43]. von Siemens' biographer insists that the requirements of overseas trade were decisive for the foundation of the Deutsche Bank but notes that business was not limited to foreign trade, and justifies expansion on the domestic front by the need to have the bank's acceptance signature widely recognized [ibid., 58]. In the crisis of 1873, a number of banks failed and the Deutsche Bank took over several of them. In the beginning it restricted itself to state loans, communal loans and railroad securities, holding back from founding industries and issuing securities. Gradually however, it built a syndicate of banks to move into industrial finance and underwriting. The finance of foreign trade was forgotten or put aside because of the necessity to build domestic roots [ibid., 111], with foreign lending but not finance of German foreign trade, undertaken in the 1890s. Foreign-trade finance remained the province of the Hansa cities, and particularly Hamburg, with strong ties with London.

Victory in 1871 brought the Darmstädter Bank from Hesse to the capital and the Mitteldeutsche Creditbank from Frankfurt. The crash of 1873 produced a lull in the movement, and then came the Dresdner Bank in 1882, the Schaffhausen'scher Bankverein in 1892, the Commerz und Diskonto Bank from Hamburg in 1892. Whale comments that these offices were at first only branches, but soon grew to be coordinate head-offices which rather eclipsed the original head offices [Whale, 27-28]. The process is set forth in more detail in the centennial volume of the Commerz Bank. The Mitteldeutsche Bank, which had started in Sachische Meiningen in 1856 because it had been refused permission to locate in Frankfurt, opened its Berlin office, as noted, in 1871. From 1889 it began a policy of building local branches both in Frankfurt and in Berlin. In 1905 the numbers of such offices had

reached six in Frankfurt, including Hoechst and Offenbach-am-Main, and 17 in Berlin. These numbers reflect "the gradual shift of weight to the capital and the squeezing out of Frankfurt from its leading position as bank and stock exchange city." After Anton Gustav Wittekind retired in 1912 after 40 years of leadership, two successors were appointed, one in Berlin and one in Frankfurt.

The move of the Commerz Bank from Hamburg to Berlin was more complex as befitted a surrender by the possessor of a proud heritage. Founded in Hamburg in 1870, the Commerz Bank saw its early hopes dashed by the crisis of 1873. Deciding to follow the fashion of the times and to found a subsidiary in Berlin, it absorbed the private banking house J. Dreyfus and Co. of Frankfurt-am-Main which had acquired a Berlin subsidiary in 1891. The merger gave rise to some competition in Frankfurt, but the Commerz Bank's chief interest from the first had been in Berlin. In 1899 it embarked on a policy of branch offices in Berlin, followed up by more branches in Hamburg. The Frankfurt office of J. Dreyfus was given up in 1897 in favor of a commandite with the reconstituted firm. Even this was ended in 1908. In 1905 the Commerz Bank merged with the Berlin Handelsbank, bringing it a head office for its subsidiary and 14 deposit branches. By 1914, the bank had 18 branches in Hamburg and 44 in Berlin [Commerz Bank, passim].

Riesser attacks a statement that banks in Germany differed from those in Britain in that the British banks moved from the provinces to London, whereas those in Germany moved from the capital to the provinces [Riesser, 654]. The latter process started only after 1897 when the big banks had finished moving to Berlin. Then came filling out of the national system in directions and areas which had hitherto been neglected, exactly as did

individual British banks. In 1900, for example, the Midlands Bank finding itself with few branches south of a line London to Bath, created a network in the area [Crick and Wadsworth, 341].

The German experience differed from that on the rest of the Continent and North America in that the metropolitan financial center for the country did not also serve for intermetropolitan dealings. Berlin had borrowed and lent abroad in the first half of the century when the German capital market was fragmented, just as did Frankfurt, Cologne, Hamburg, Augsburg [Brockhage, pasaim]. With the unification of the German capital market after 1871, domestic functions focused on Berlin, finance of foreign trade in Hamburg. The Diskontogesellschaft had worked closely with the Norddeutsche Bank of Hamburg since the early 1860s. The Deutsche Bank established a Hamburg subsidiary, as noted, in 1872, but became effectively interested in overseas operations only in 1886 [Wiskemann, 237]. The Darmstädter Bank opened a subsidiary in Hamburg in 1890, the Dresdner in 1892, and the Mitteldeutsche in 1896. Wiskemann observes that Bismarck's interest in capital exports was not exclusively political. The "Imperialistic phase" of German capital lending began after his dismissal [ibid., 238]. However much it might rival Britain in shipping and in direct rather than entrepot purchasing, Hamburg did not challenge London in finance, whether from inability or disinclination.

The position of Berlin as a breakpoint for transport between the Elbe and the Oder rivers, and its subsequent development as a railroad center have been mentioned. Friedrich List characterized it as an important communications center as early as 1833 [Baar, 531]. Two scholars, one an economic, the other a social historian, have recently suggested that part of its importance lay in the fact that it was midway between the Ruhr and

Upper Silesia [Borchardt, 152; Bohme, 1966, 333]. Borchardt's other reasons seem more compelling: the concentration there of the Prussian authorities, the German imperial authorities, the central bank; the preference of associations and other organizations for that city, its easy access to Hamburg, and the like. The German geographer W. Christaller developed a theory that central locations tend to be chosen as a metropolis, but this view has since been discredited as counterexamples, such as New York and London, abound [Duncan, 81]. Even to the extent that the central-place theory retains validity, there is no reason why it should be central between heavy industries which are competitive, rather than complementary. The break-in-transport theory of metropolitan location requires connections between intercommunicating portions of a common hinterland, not a point on the ridge of equal-delivered prices between competitive suppliers.

Our interest in the formation of a financial center in Germany shifts to the period after World War II. With the isolation of Berlin, and the formation of zones of occupation, the major banks were broken up. In 1945 the Deutsche Bank, for example, was divided into 10 branch institutes in the three western zones of occupation. With the relaxation of Allied control in 1952, these were amalgamated into three regional banks, the Süddeutsche Bank in Frankfurt, the Rheinische-Westfälische Bank (later Deutsche Bank West) in Düsseldorf and the Norddeutsche Bank in Hamburg. When permitted in 1957, these three parts were reunited into the Deutsche Bank AG with a legal seat at Frankfurt, but three "central offices" at the three cities indicated, each of which had several members on the common management committee. In the mid-1960s the central office in Hamburg was reduced in status. In 1973 Frankfurt dominates Düsseldorf in the Board of Directors,

with eight directors to Dusseldorf's five, and weekly board meetings are held mainly in Frankfurt. The General Secretary of the Deutsche Bank explains that Frankfurt has become the main focus of the Deutsche Bank because the city is the most important financial center of postwar Germany. The Bundesbank is there, the Frankfurt bourse has the greatest turnover of all the exchanges in the German Republic and both other so-called Grossbanken have their head offices in Frankfurt. [Deutsche Bank, letter of January 25, 1973; Seidenzahl, 375ff; Wechsberg, 260ff].

It is of some interest that Cologne which was the nearest city to Bonn, the postwar capital of the German Republic, was never in contention. Dusseldorf, which gave Frankfurt the greatest competition, is the trading and financial city of the Ruhr with its heavy industry. Hamburg and Frankfurt had been chosen by the British and American authorities respectively as the seats of their Occupation Forces in Germany. After the removal of the moratorium on foreign investment in Germany, the head offices of American-owned multinational corporations gravitated to Frankfurt, partly perhaps because of the large and efficient international airport, partly because of the American governmental presence there, although the decisive element in that presence was shortly moved to Bonn.

In the same fashion, the Commerz Bank of Hamburg was divided into 10 successors, reassembled into three in 1952 and one in 1958. Various directories give its head office in the 1960s as Dusseldorf. By 1973, its head office is Frankfurt.

The fragmentation of German financial (and political) areas and their reunification in the west contain a reflection of United States political preoccupation with decentralization, and the reality of the forces pushing

in the direction of a single financial center. In the initial stages, United States policy harbored or at least fostered the illusion that each of the 8 Länder might have a central bank and a separate monetary policy. When the occupation forces were withdrawn, Land banks were quickly unified in a Bank deutsche Lander, later transformed into the Bundesbank. An idealistic (ideological?), interesting but futile experiment.

VI. Italy - Turin, Florence, Rome or Milan?

"...there occurred a separation between the political and financial capitals which is peculiar to America. In Europe the two are generally the same: London, Paris, Berlin are the seats both of government and of the money market [Myers, 6]. Most importantly, perhaps, but not generally, as Milan, Zurich and Amsterdam testify. The formation of the Italian financial center, however, is more complex than this statement might imply. With the unification of Italy in 1860 under Cavour, the financial center was Turin, and it remained so for 30 years, despite abortive attempts to shift it to Florence, when that became the capital in 1865, and to move on to Rome in 1870 when the capital was finally established there. The Banca Tiberina of Rome, as mentioned, transferred its headquarters from Rome to Turin in 1879. But Turin did not last as Italy's financial metropolis, losing out in the 1890s to Milan. Mistakes of banking, the tariff war with France which was a strong influence in Piedmont, the province in which Turin is located, better transport connections with Europe through the Gotthard and Simplon tunnels, the establishment of new banks with German capital in Milan all played a role. It is necessary to explain first why the financial center did not move with the capital, as the attempt was made to do, and if not, why Milan rather than the original Turin.

Italy, of course, had an ancient tradition in banking. Venice and Florence were banking centers in the Renaissance, Lombard Street in London was named after immigrant bankers from Milan and its surrounding area. In the late 18th century when port cities were banking centers, Genoa, the capital of Liguria, was a flourishing trading town, with a developed financial community, with a smaller one down the coast at Leghorn.

These city-states lacked a substantial hinterland, however [Luzzatto, 1960, 160], the small city-state declined, and Italy reached the middle of the 19th century without a substantial banking center outside of Genoa. As late as 1844 the Genoans were convinced that Turin could not become a banking center [Cavour in Romani, 591]. Attempts to create banks in Milan, for example, had failed between 1821 and 1847, and Lombardy had to rely on capital imports from France during the period of seasonal financial stringency caused by silk [Greenfield, 142]. Then came unification under the leadership of Count Cavour of Piedmont, and rivalry in France between the Pereires and the Rothschilds as to which could stake out a dominant position in Italy, including both banking and finance of the state and public works, largely railroads. Turin forged ahead, while Lombardy lay under Austrian domination until the German-Austrian war of 1866, and Rome was not to be joined until Garibaldi's adventure of 1870.

The financial difficulties of the new regime led to foreign borrowing and to the selling off of royal and church land. The leading private banks numbered 3 in Genoa, one in Leghorn (another port), four in Milano and 13 in Turin. Most of the Turin bankers participated at the end of the 1860s in forming so-called "ordinary banks of credit," equivalent in a broad way to joint-stock banks of Britain or commercial banks in the United States.

Speculative fever in Paris stimulated the *Crédit Mobilier* to found the *Società Generale di Credito Mobiliare*, the *Société de Crédit Industriel et Commercial* to start the *Banca di Credito Italiano*. The English ambassador joined with the Ricasoli family of Florence to found the *Banca Anglo-Italiana*, again in Turin, where in all 13 banks of ordinary credit were founded from 1860 to 1866, including the notorious *Banco Sconto e Sete* (Bank of Discount and Silk). In 1866, with the movement of the government to Florence, de Boullay from Paris started a new bank in Florence which sold American mortgages, shares in the tax collections of Lecco, mortgages, and quickly suspended payments. The *Credito Mobiliare* which for 30 years was to be the most important bank in Italy after the *Banca Nazionale*, the predecessor of the Bank of Italy, transferred its head office to Florence in 1865 [Luzzatto, 1963, 63ff].

Gerschenkron has ascribed the development of Italy after 1896 to the work of the *Banca Commerciale Italiana* and the *Credito Italiano*, founded with largely German funds, and their industrial investments. The question inevitably arises why the *Credito Mobiliare* and the *Banca de Credito Mobiliare* of 1863 did not produce the same result thirty years earlier [Cameron, 1972, 18]. Cameron indicates that if the banking system is to be effective, government must assure minimal conditions of both financial and political order and refrain from random ad hoc interference. Jon Cohen who supports the Gerschenkron thesis for the end of the century [Cohen, 1966, passim] explains the earlier failure by the poor development of financial institutions, their geographic limitation to the north and central parts of the country, their general inefficiency, and by a "vague reference to real estate speculation" [Cohen, 1972, 60].

The banks of the 1860s were supported in 1871 and 1872 by a new wave of foreign banks including the Banca Italo-Germanica which started in Florence, moved to Rome, and developed branches in Naples, Milan and later Trieste and Leghorn. It speculated unwisely and collapsed in 1874. Another with a similar experience was the Banca Austro-Italiana. Both names indicate nationality was not a critical factor at this stage, or that German banks would succeed where French failed. Somewhat longer lived was the Banca Generale founded in Rome in 1871 with Milan and foreign capital [Clough, 125]. Luzzato comments that this boom and bust was unimportant in an economy which was 4/5ths agricultural and not integrated through cheap transport. Losses were mainly suffered by foreign speculators, plus some Italians in Turin, and Genoa, and in a minor measure in Florence, Milan and Leghorn [Luzzatto, 1963, 105].

In this period Piedmont and its capital Turin remained the financial center of the country. The Bank Tiberina which had close associations with the Banco Sconto e Sete moved north from Rome in 1879 and maintained its legal seat in Turin until 1889. Its purpose was to enlarge its capital for speculation in Roman real estate, and it sought capital not only from the Banco Sconto e Sete but also from the Banca Nazionale [Luzzatto, 1963, 211]. In 1884 the Banca Napoletana was transformed with the help of the Banca Nazionale and new Genovese, Turin and Swiss capital into the Banca di Credito Meridionale for the purpose of investing in Neapolitan real estate under the regulations of a law of the same year [*ibid.*, 212]. The Credito Mobiliare seems also to have moved back from Florence to Turin to be in the action, although I find no explicit mention of a date, and to have participated alongside the Banca Generale in lending to the steel and shipbuilding complex

at Terni, to railroads, and for housing, especially in Rome. One of the six banks of issue, the Banca Romana, was also deeply involved in the financing of Rome expansion. The note circulation of the Banca Nazionale reached its limit in 1866. The limit was raised. [Smith, 163]. The Bank Tiberina began to fail. It was saved. Two matters caused crisis to erupt: the tariff war with Italy in 1887 which provoked the withdrawal of French capital, and the revelation that the Banca Romana had violated its statutory note-issue limit, leading to a political scandal. The result was the failure of the Credito Mobiliare and the Banca Generale, the forced amalgamation of the seven banks of note issue, including the Banca Nazionale and the Banca Romana into the Bank of Italy, and the collapse of Turin as the financial capital of Italy. The failure of the Credito Mobiliare is sometimes ascribed to the death in 1885 of its leader Balduino. While he was alive the bank's speculations were happy. In his contemporary annual articles on Italian financial affairs, Pareto blamed the failures on the bank's engaging themselves in affairs patronized by the government and advised the Banco Commerciale Italiana and the Credito Italiano to refrain from such activity [Pareto, 59]. Under his successor, Bassi, it entered into building speculation in Rome and Naples [Luzzatto, 1963, 266]. The Banca Generale lost heavily in Terni, in railroads (the Ferrovie Meridionale) in Milan and foreign investment. Luzzatto notes that its Credit Mobilier-type operations were pursued from the Rome head office, and that the Milan branch went in for strictly commercial banking [*ibid.*, 250].

An earlier failure of the Banca di Milano was the result of the failure in 1882 of the Union Générale of Paris, which had created it.

The wave of liquidation of 1887 to 1893 removed Turin from the leadership, and put Milan and Genoa ahead. The larger Lombard and Ligurian banks

built branches in Piedmont, including the capital, Turin, and depositors shifted their funds to them [Fanno, 92n].

In the mid-nineties came the Banca Commerciale Italiana at Milan, and the Credito Italiana which started with its head office in Genoa and ultimately moved it to Milan [Luzzatto, 1960, 465]. The former was purely German in origin, started by Bleichröder and the Deutsche Bank. The latter took over the Milan remnant of the Banca Generale and had German, Belgian, and Swiss stockholders. In 1898 a Società Bancaria Milanese was started, was transformed into the firm Weill-Schott Brothers and Co, and absorbed another private bank in Milan. It expanded rapidly in boom conditions, acquired the Banco Sconto e Sete in 1904, kept on expanding, and in 1907 was dominated by its Genoan group. The Bank of Italy supported it, being interested in developing a third large bank in Lombardy, in Liguria and above all in Genoa. Bonelli notes that the bank lacked a central direction, with its Milan office entirely unaware of the risks taken in Genoa. When the international money market tightened in the crisis of 1907, the Società Bancaria Italiana as it was now known collapsed, despite the efforts of Stringher of the Bank of Italy to save it. [Bonelli, 29-37]. This left Milan as the undisputed financial center in Italy. The more interesting question is whether it was the financial center of Italy.

The critical points in this abbreviated account of the geography of Italian banking from 1860 to the first World War are several: why not Rome? if not Rome, why not Turin instead of Milan? what role in the choice between Turin and Milan is the nationality of the foreign sources of capital and direction?

The rejection of Rome seems evident. It was late as a capital, located

badly in relation to the productive parts of Italy, with poor transportation. In no sense could it be called a metropolis with an economic hinterland for which it provided service.

Rome in fact was a parasitical city. The Church sucked up income from the rest of Italy and the world, and the services it rendered in turn were spiritual and economically elusive. Savings were limited, the demand for capital for investment in housing very large. It was a sink-hole for capital, not a functioning pivot for allocating capital throughout the country.

The rise of Milan to preeminence over Turin is associated with the excesses and scandals of 1887-1893, the loss of prestige of France relative to Germany after 1871, the deep cleavage between France and Italy over the tariff agreement of 1887 and the political banking of Germany with its Lombard connections. More should be attributed in my judgement to the locational aspects. Turin got the jump on Milan with the Fréjus pass and the Mt. Cenis tunnel in 1870, the latter projected under Cavour in 1859 before unification. Cavour's policies in railroads, canals and in economic development generally gave the Kingdom of Sardinia (Piedmont and Sardinia) a head-start in economic development, but easy access to France was a vital aspect of it. When the Gotthard tunnel was finished in 1882, the position of Piedmont was weakened and Milan's strengthened; the completion of the Simplon tunnel in 1906 intensified the central character of Milan and the increasingly peripheral character of Piedmont.

An hypothesis which emerges from this review is that Italian financial integration did not take place until 1893 and had an important role in the economic upsurge which followed to World War I, much along lines predicted by Shaw and McKinnon. Prior to that time, the capital market was fragmented,

despite a certain amount of branch banking, the active role of the Banca Nazionale and the government, and the close connections of banks in Turin and Rome on a few investments, largely such railroads as were left over by foreign investors, and housing. Such an hypothesis would explain why German Crédit-Mobilier-type banks succeeded in stimulating the Italian economy when French banks of the same character could not. Turin industry grew rapidly after 1893, with financing except for the automobile industry which used the Turin bourse, by the Banca Commerciale Italiano and the Credito Italiano [Castronovo, 200ff, 215ff, 243]. From 1860 to 1885, Italy, even Central and Northern Italy, was not an integrated financial market. When it became one, economic development spurted.

VII. A single Center in Switzerland?

The case is made that Switzerland differs from the countries already discussed in not having a single financial center, but rather three: Zurich, Basle and Geneva:

"In contrast to other financial centers....the money market in Switzerland is not concentrated in any one city. This fact is chiefly due to the political organization of Switzerland as a confederation of twenty-five states (cantons) which have wide powers of local government. As an outgrowth of territorial and historical factors, a strong individualism exists which is responsible for the lack of uniformity in the social and economic structure of the various states. Consequently there has developed no single preponderant business or financial center such as Paris in France, London in England, or Amsterdam in Holland" [Schwartzzenbach, 482-83].

Published in 1935, this statement was hardly true at that time. Of the seven large commercial banks then, five had their largest office, if not the nominal head office in Zurich and two in Basel [ibid., 497]; of the seven stock exchanges only Zurich, Basel and Geneva were of any importance, and the Zurich turnover was from 2 to 4 times greater than that of Basel, with Geneva an also-ran [ibid., 519]. Switzerland provides a classic case of the formation of a single financial center, since it started with many, of which Zurich was originally not particularly important as compared with Geneva, Basel, Berne or Winterthur. Zurich emerged as the financial center at the end of the 19th century, despite the connections and traditions of Geneva and Basel, the governmental seat at Berne after confederation in 1848. Its success can be ascribed to its focal location in the railroad age, especially after the building of the Gotthard tunnel, and to the pushiness of its bankers.

Geneva and Basel were old banking communities with long-established connections. Geneva's lines ran to Lyons which had a great Swiss colony the so-called "Nation Suisse" [Ik1e, 10] and to Paris where its Protestants mingled freely with the Huguenots and Jews of the hautes banques and the Bank of France. Many Parisian bankers had spent the Revolution and especially the Terror in Geneva, although others installed themselves in Zurich, Neuchatel, Lausanne or Winterthur [Lévy-Leboyer, 425, 431]. With the return of peace, 15 out of 22 hautes banques in Paris in one list were said to be of Genevois origin [ibid., 432n]. The traditional names of Burchardt, Iselin, Stahelin were long associated with Basel banking, lending to Switzerland generally, but principally to Baden, as far north as Karlsruhe and Stuttgart, and to Eastern France in competition with Paris, and especially to Besançon, Mulhouse, Strasbourg and Nancy [Ik1é, 14]. Mulhouse

was even called the daughter of Basel finance [Gille, 88].

Zurich had some tradition in foreign banking going back to 1750, but was hardly a significant town 100 years later. In 1850 it was less important than Geneva or Basel, and about on a par as an economic center with Winterthur when it started its meteoric rise. It rose in population 11 times between 1850 and 1910 [Union Bank, 55]. In World War I its position in the interior of the country, and away from the belligerents' borders resulted in the concentration there of international transactions.

The position can be well illustrated with an account of the Union Bank of Switzerland, formed from an amalgamation in 1912 of the Bank of Winterthur, established in 1862, and the Toggenburger Bank originally of Lichtenstein and later of St. Gall in Eastern Switzerland. The Bank of Winterthur started out bravely as a banque d'affaires in the boom of the 1860s, in discounts, industrial-security issuance, and in railroad promotion. Winterthur was connected by railroad from the 1850s with Zurich, Frauenfeld, Schaffhausen, St. Gall. The town fathers proposed making the city a center for storage and transshipment of goods, and built a weighing house, a municipal granary and a storage warehouse at the time that they formed the Bank of Winterthur. By 1872 the Bank was a solid affair with a flourishing business through German Switzerland.

In 1872 the city embarked on a foolhardy scheme to build a "Swiss National Railway," to make Winterthur a link in the network running from Lake Constance to Lake Geneva, by-passing Zurich, Berne and Lausanne. Part of the inspiration was pique against Zurich, the capital of the canton in which Winterthur found itself and against Alfred Escher, "the strongest personality in economic and political life at the time" [Iklé, 18], president

of the Schweizerische Kreditanstalt which he founded in 1856 and president of the North-eastern Railroad, later promoter of the Gotthard tunnel. The threat of Winterthur to Zurich and Escher was met by prompt and effective action by the North-eastern and Central railroads. The Swiss National Railway went bankrupt in 1878, and the city had to issue debt to make good its share of the loss when assets of the company in which 31 million Swiss francs had been invested were sold at auction to the North-eastern Railway for less than 4 million [Union Bank, 38-39].

"If you can't lick them, join them." Already in the 1870s there had been a demand for the Bank of Winterthur to establish a foothold in the business center of Zurich. As Winterthur stagnated, and Zurich flourished, the Bank moved late at the end of the century to shift its center of gravity. In 1897 it acquired a participation in a Zurich banking and stockbrokerage firm. This proved to be unsatisfactory and was given up in 1901. The Bank then strove to overcome its prejudice against branches, and in 1906 acquired the Bank of Baden's Zurich office which had been established in the 1890s. Part of the stimulus was the rising strength of the Swiss Credit Bank, Escher's creation, growing with the city of Zurich and his success in rail-roading; and threat of the Swiss Banking Corporation. This latter had started out in mid-century as a syndicate of private bankers calling itself the Bank Corporation, formed into a bank, the Basler Bankverein in 1870. In 1895 it merged with the Zurcher Bankverein to form the Swiss Bank Corporation [Ikle, 15]. The Swiss Credit Bank and the Swiss Bank Corporation belonged to the "cartel of Swiss banks" formed in 1897 to place the loans of municipalities and cantons. The cartel excluded the Bank of Winterthur, until it formed a rival group. The Bank of Winterthur merged with the

Toggenburger Bank of eastern Switzerland in 1912, started branching into French Switzerland in 1916 and went into Italian Switzerland in 1920. Its last penetrations into Basel and Berne occurred in 1920 and 1923.

The bank's history asserts that it was inevitable after the formation of the Zurich office that that should become the heart and center of the institution. The "administrative offices" were kept in Winterthur and St. Gall, with annual meetings alternated between them from 1912 to 1945. There was one managing director for Winterthur and Zurich, and one for Lichtensteig and St. Gall, who acted alternately as chairman of the Annual Meeting. "Gradually the Toggenburger chairman gave precedence to Winterthur, and after his death in 1921, the two-consul system fell into desuetude [Union Bank, 74]. In World War I, the foreign exchange business of Zurich grew, as indicated, and this encouraged the concentration of the Union Bank's commercial business in Zurich. Even before the war, that branch had been making rapid progress in the handling of its stock market and credit operations. A new building was completed in Zurich in 1917, and a year later the accounting department was moved there from Winterthur. From then on, the Board of Directors held all its meetings in the Zurich building. In 1912, the management had consisted of two ex-Winterthurers and two ex-Toggenburgers. One retired, and three new managers from Zurich were brought in, including the head manager, Paul Jaberg. Another death left the Zurich preponderance as three of five [ibid., 86-88, 132].

Previous mention has been made of the move of the Eidgenössische Bank from Berne to Zurich in 1892.

Of further interest is the fact that the Swiss National Bank, created in 1905 after a legislative proposal had been rejected by referendum in

1894 is domiciled in Berne (as of 1935), but effectively divided between Berne and Zurich. The seat of management is Zurich, and two of three departments are located there: discounts, foreign exchange and secured loans in one; giro and auditing in the other. The third department in Berne deals with note issue, cash reserves, administration, and the fiscal agencies for the Federal government and the Federal railways [Schwartzzenbach, 484-86]. This division brings all subjects with uncertainty and need for face-to-face communication to Zurich, except those which involve the Federal government, leaving routine questions - except possibly cash reserves - for another location.

There is a question today whether telex and the telephone have made Basel, Geneva and Zurich one financial center, with no real distinction among them. The fact that the head office of one of the biggest banks is located in Basel, rather than Zurich might be said to subtract from economies of scale and shopping convenience which form the basis of agglomeration, unless the distances between Zurich and Basel, and the language barrier if one adds Geneva, are so slight as to be negligible. I think not. Some American corporations - such as O.A.S., chose Geneva because it is a more international community than Zurich, ever since the location there of the League of Nations in 1919. Moreover, the French-speaking atmosphere may be more attractive to international corporations than Schweiz'sche Deutsch or even schriften Deutsch. But Zurich clearly dominates. They are the gnomes of Zurich, not the gnomes of Switzerland. The location of the Bank for International Settlements in Basel - a decision in 1930 dictated by railroad, not airplane connections, and of the League and its successor Economic Commission for Europe and the

European offices of the United Nations in Geneva, keep those cities alive administratively and as banking centers. But Zurich is the focus.

Even had it not been for its traditional banking relations to France, Geneva would have held on to some (most?) of its role as a distinct financial center because of the cultural difference between French- and German-speaking Switzerland. It is of interest to contemplate whether it would have outstripped Zurich if Suisse romande had been larger and wealthier than the German-speaking parts. Lugano in a small way, remains a separate financial community, linked to Italy by communication ease as well as language and separated from the rest of Switzerland by the Alps, however much tunnelled. But Ticino is a very small proportion of total Switzerland. Geneva, the Vaud, the Valais, Neuchatel and the other francophone portions are substantial both in numbers and economically. It is likely but not certain that cultural differences make for separation of financial functions.

Switzerland, I conclude, is not very different in financial agglomeration from other European cases. Tradition, the federal form of government, the seat of government in Berne, the international roles of Basle and Geneva and financial relations of those cities with particular hinterlands abroad, at least historically, were overwhelmed by the central location of Zurich at a crossroads. The crossroads was partly arbitrary and manmade, if we accept the Union Bank's account of the role of Escher, which I have not pursued in depth. Zurich benefited from the accident of World War I which inhibited the two financial markets on the border; Geneva with its relations with France and Basle connected to Germany, exclusively after the loss by France of Alsace-Lorraine, may to some extent have neutralized each other. There can be no doubt that Geneva and Basle are today closely connected with

Zurich, and each other. But Zurich is the financial capital of Switzerland, and an international money and capital market, not it might be added, the political capital, Berne.

A final point: if one were to measure total assets, Zurich would stand out, but not by so much as when one looks at commercial banks, or private banks. This is because of the large role of the Cantonal banks. Restricted to particular cantons, they of course do not move. Their total assets rose ahead of those of the "Discount banks" and "Other banks" in the 1870s, and by 1910 constituted four-fifths of the banking total [Johr, 457]. But the Cantonal banks put half their funds into mortgages, in which the national market is less perfect than in bills of exchange, commercial loans or stock exchange securities. In the 1960s it took almost 2 full percent difference in savings bank interest to move savings bank funds from the East to the West Coast in the United States, reflecting that in this capital market, integration proceeds slowly. The Cantonal banks, the first of which was established in Berne in 1834, do not constitute so much an exception to these remarks, as a different story.

VIII. Toronto-Montreal in Canada

It was initially contemplated that this exercise in comparative economic history would be limited to Europe, and thus to countries at broadly the same stage of development with similar factor proportions. The more one considers Canada, however, the more one observes certain interesting and perhaps unique features. The next section deals succinctly with the United States as a companion piece to Canada.

Chartered banking in Canada began after the Napoleonic war. The Bank of Montreal opened its doors in 1817 without a charter. The first

chartered bank, according to Neufeld, was the Bank of New Brunswick in 1822, though the Bank of Montreal centenary volume claims 1821 as the date for its charter [Neufeld, 39; Bank of Montreal, 14]. Then quickly followed the formation of the Quebec Bank, Bank of Canada (not the central bank started in 1936, but a Montreal bank established by American citizens), and the Bank of Upper Canada.

Like much of its population, initial practice followed the Scottish tradition of branch banking, rather than the English, and the Bank of Montreal opened agencies in Quebec, Kingston and York in the first year (1817). Kingston and York (later called Toronto) were in Upper Canada (now Ontario) so that the tension between Montreal and Toronto, or between the Province of Quebec and Ontario, may be said to have started early. In the same year the Bank of Canada founded an agency in Kingston. The Bank of Montreal opened an agency in New York in 1853, the first such, and one of two as late as 1870 [Neufeld, 123]. The Bank of British North America organized in London in 1836 opened branches in a year in Toronto, Montreal, Quebec, St. John, Halifax, and St. John, Newfoundland [Ross, 22].

While Montreal handled the export of furs and the import of general merchandise, Nova Scotia thrived on shipbuilding. This lasted from as early as 1761 to 1874, when wooden ships lost out to iron-clads [*ibid.*,]. The major banks in Nova Scotia were the Halifax Banking Company, formed in 1825 from Collins, an earlier private bank, the Bank of Nova Scotia, organized in 1832 as a counterweight to the monopoly of the former, and Merchants Bank of Halifax (later the Royal Bank of Canada) proposed during the Civil War, when shipbuilding had its last expansion. The two greatest industries largely indebted to the Merchants Bank passed into receivership

in 1885. "It was now realized that if enterprises of national importance were to be financed, the bank must become national in scope, with capital and reserves that its position could not be shaken by local losses" [Royal Bank of Canada, 17]. The bank resolved in that year to extend its operations to Montreal, and after establishing a branch there, opened agencies in the east and west of the city. (It is of some interest to observe that in the same year, poised on the brink of decline, Halifax established the first clearing house in Canada, but this example was quickly followed in a few years by Montreal (1889), Toronto and Hamilton (1891) and next Winnipeg [Jamieson, 25]). In twelve years the focus of the bank had shifted from Halifax to Montreal. In 1898, Duncan of the Halifax branch ceased to be in sole command of the bank, though he remained for one more year in charge of the head office in Halifax and the branches in the Maritimes and Newfoundland. With the upsurge of business, Pease, the Montreal manager, was made general manager; the name was changed from the Merchants Bank of Halifax to the Royal Bank of Canada; branches were opened as far away as Vancouver; some 5000 new shares of \$250 par were sold to prominent Americans. At the annual meeting of 1906 it was proposed to change the head office from Halifax to Montreal "the natural center for expansion." This was accomplished the following year [ibid., 17-24].

The decision of the Bank of Nova Scotia took place more slowly. Again, a personnel change was the occasion.

"One of the first important decisions made by the new general manager--a title which replaced the old Scotch form of "cashier" in 1898--was the removal of the Bank's executive office from Halifax to Toronto in March, 1900. The change was a natural

outcome of the westward turn of events which followed closely on the linking of far-flung provinces by the Canadian Pacific and other railway systems and was a necessary step if the Bank were to play a leading role in the new prosperity and economy of the twentieth century. Many of its Maritime customers had already become dominion-wide concerns, and important connections which it had established in Ontario, Quebec and Winnipeg, necessitated banking facilities free from the delay attendant upon correspondence between these points and Halifax. It is a matter of pride to the citizens of Nova Scotia that the Bank still retains its head office in Halifax, and that year by year the shareholders meet on the fourth Wednesday in January in the Maritime home of their institution--now a splendid new building completed last year and fittingly used for the first time by the directors and shareholders at the hundredth annual meeting in January, 1932." [Bank of Nova Scotia, 81, 83].

At almost exactly the same time, Max Aitken, later Lord Beaverbrook, became secretary to a Halifax firm in 1899 at the age of 20. He arranged a merger between the Union Bank of Halifax and the Commercial Bank of Windsor, which presumably transferred the focus of its operations from Nova Scotia to Ontario. Later he formed an investment concern, Royal Securities, in Halifax which operated in new ventures, mergers, reorganizations and the like. This was moved from Halifax to Montreal in 1906 [Neufeld, 488-89].

Puzzling in the foregoing is the lack of a single magnet of attraction: Montreal, Toronto, Windsor and again Montreal. There is temptation to say

that Montreal was the attraction in 1887 when the Merchants Bank of Halifax (Royal Bank of Canada) made its decision, and delay in the case of the Bank of Nova Scotia produced a different choice because of developments between 1887 and 1900. Moreover Windsor in 1899 is odd unless the Union Bank was a second or third choice. But then why Montreal again in 1906? And why once the Royal Bank had established itself in Montreal, and Toronto outstripped it, if Toronto in fact did - a question we are about to examine - why did not the Royal Bank move on and/or the Bank of Montreal? The Bank of Montreal declined relatively to the Canadian Imperial Bank of Commerce, located in Toronto [Neufeld, 573], but presumably not enough to warrant the expense and wrench of transferring to the livelier site.

The decline of Halifax as an early financial center poses no problems, but the drawn-out resolution of the competition between Toronto and Montreal is a puzzle. Toronto started to compete with Montreal in the 1850s, was beaten back in the 1860s when a financial crisis followed the end of the Civil War in the United States, and then began a long rise to rival status. With the western boom and the wave of British investment after 1896, Toronto gained further, even though much of the finance from London was handled through Montreal. After World War I, there were still further gains for Toronto but no clear-cut ascendancy. Canada established a central bank to free itself from financial dependence on the United States, a reversal of the tendency for centralization, and well after World War II, in the 1960s, the West Coast of Canada began to develop a money and capital market of its own [Botha, 138-43; Eaton and Bond, passim]. Toronto gained on and ultimately surpassed Montreal as a financial center, but the latter did not give way, as Cologne, 19th century Frankfurt, Lyon, Turin, Philadelphia,

Baltimore and Boston had done. The money market in Canada is said to be centered in "Toronto and Montreal" or reference made to the interest differential between New York and "Montreal-Toronto" [Botha, 138, 143]. The Royal Commission on Banking and Finance refers to foreign exchange brokers of Montreal and Toronto, or the dealer inventories of the secondary security market as "concentrated in Montreal and Toronto" [Royal Commission, 294, 315]. The Bank of Montreal and the Royal Bank retain their head offices in Montreal whereas the three smaller but faster-growing (to 1960) chartered banks, the Canadian Imperial Bank of Commerce, the Bank of Nova Scotia and the Toronto-Dominion Bank are headquartered in Toronto [for size in selected years 1870-1970 see Neufeld, Table 4.6, 98]. After 1960 the Bank of Montreal and the Royal Bank have grown in total assets relative to the Toronto three, but in security deals the Royal Commission in 1964 observed that

"the main volume of business has remained concentrated in Montreal and Toronto with the latter tending to grow in relative importance in response to the westward shift of Canadian economic activity and the replacement of overseas countries by the United States as the primary source of external capital" [Royal Commission, 343].

Montreal is of course as close to New York as is Toronto, if New York replaces London as the source of overseas investment in stocks and bonds issued by Canadian entities. If we leave aside, however, the question whether Montreal or Toronto is the more important money and capital market for this or that financial instrument, it seems clear that either the process of Toronto emerging as the single financial center of Canada is drawn out at much greater length than in other countries, or that the two centers have been stabilized in a cooperative and stable relationship which is

exceptional. "Rivals, their capital structures became and remained closely linked" [Masters, 211].

For the early period of Toronto's rising out from under the shadow of Montreal, we are fortunate in having a history which explicitly uses Gras' model of four stages - commerce, industry, transport and finance - en route to becoming a metropolis as he chronicles the transport and financial rivalry between Toronto and Montreal. Masters' study is focussed on the period from 1850 to 1890, when Toronto triumphed over its other Ontario rivals and emerged as the dominant financial center of that province. Along the way, there was a continuous struggle with Montreal, a struggle handicapped by the necessity to avoid falling under the financial domination of New York [Glazebrook, 193-94]. The major episodes in that struggle: construction of the Grand Trunk railroad and early Welland and St. Lawrence canals; the transfer of the government account from the Bank of Upper Canada in Kingston to the Bank of Montreal in 1864; the failure of the former in 1866; the policies of E. H. King, the general manager of the Bank of Canada, to pattern banking legislation after the National Bank Act in the United States, first, moving over from branch to unit banking to keep ahead of any bank which might challenge it, and second, requiring banks of issue to hold government debt, thus relieving the Bank of Montreal; the struggle over the Canadian Pacific Railway terminus in the 1870s is too detailed and complex perhaps for a non-Canadian readership. The central point is that Ontario in the 1860s was alarmed at the growing strength and dominance of the Bank of Montreal, which it believed to be draining loanable capital from Ontario to Montreal, and determined to resist it [Masters, 59]. The means were political efforts to affect transportation routes so as to bring

them to and through Toronto, the creation and fostering of banks such as the Bank of Commerce in 1866 and the Dominion Bank in 1870, and influencing banking legislation [*ibid.*, 97]. From 45,000 in 1861, Toronto rose to 210,000 by 1901, while Montreal was growing from 90,000 to 270,000. Thereafter as money and migrants poured west, Toronto continued to gain on Montreal, but not so as to crush it as a financial center.

The factors accounting for the rise of Toronto as a rival of Montreal, in addition to the transport system, the development of the West, and policy initiatives by Torontonians are several. One is the shift of investment from railroads to mining. St. James Street, Montreal specialized in railroad securities, Toronto in mining stocks. In manufacturing, moreover, Montreal tends to have older industries: clothing, textiles, food and tobacco products, railway equipment, plus machinery and aircraft, whereas the Golden Horseshoe area from Niagara to Toronto and around the western end of Lake Ontario, which constitutes the Torontonian hinterland specializes in flour milling (old), steel, automotive and agricultural implements, plus electro-chemical and electro-metallurgical industries based on Niagara power [Ray, 40, 41]. Casual empiricism suggests that the income elasticity of Ontario's industry outweighs that of Quebec.

The change in the source of external finance from Britain to the United States has been mentioned. Britain's gateway to Canada was naturally Montreal. New York had a choice whether to go up the Hudson all the way, or to turn west via the Erie Canal. Direct investment, however, strongly favored Toronto. A study of employment in Canadian, United States and United Kingdom-owned firms in Canada shows sharp differences by province:

Manufacturing Employment in Selected Provinces in Canada,
by Nationality of Control of Firms
(1961 - in percent of total)

	Canadian	United States	United Kingdom
Atlantic provinces	78.67	6.05	15.15
Quebec	75.95	16.84	6.35
Ontario	62.39	30.71	6.10
Canada	70.48	22.54	6.16

Source: Ray, 49

There is of course no assurance that location of production facilities governs that of head offices of investing companies, which have an effect on the location of financial facilities. It would be possible for United States corporations to locate production facilities in Ontario, but to have Canadian corporate headquarters in Montreal, in communication with the United States head office in New York. It is unlikely. With New York virtually equidistant between Montreal and Toronto, it makes sense for companies such as General Motors, with production facilities in the Middle West and finance in New York, to choose Toronto over Montreal in the interest of efficient communication between United States headquarters and Canadian production. Where a United States company has only a single factory in Canada, moreover, head office and plant are probably located together.

Toronto may be favored by United States businessmen because of the identity of language and the similarity of culture.

But what must be explained is less the rise of Toronto, than the lack of greater decline in Montreal. Some part of it may be the result of governmental policy, urging the two main banks to remain with head offices in Montreal. Unlike the position in England, France, Germany or Switzerland,

but similar to that of the Bank of Italy in Rome, the Bank of Canada remains in the capital, Ottawa, located in Ontario, but on the Quebec border. The Porter Commission notes that its senior personnel until recently have made only infrequent visits to the financial centers of Toronto and Montreal, "and that visits of financial people to Ottawa, while always welcome, are made for specific purposes only and do not provide the 'frequency of contact needed'" [Royal Commission, 322-23]. The remark is addressed to the question of efficiency in the functioning of Canadian financial machinery, which requires frequent contact face-to-face among governmental and private financial decision-makers.

It is perhaps going too far to read into it a hint that the Bank of Canada remains in Ottawa for inability or unwillingness (given the bi-cultural nature of the Dominion) to choose between Toronto and Montreal.

Canada is one of the few countries where geographers, as well as historians, have studied metropolitan development, using the Gras model. That profession, along with economists, is surprised that the relations between Toronto and Montreal are complementary rather than competitive, and that the country fails to conform to the model of metropolitan primacy. In population, the ratio of the largest to the next largest city is 1.2 in Canada, as compared with 2.3 in the United States and 7.5 in France [Kerr, 538]. Almost 350 miles apart, Toronto and Montreal overwhelm the rest of Canada, but not each other, as the table shows. Financial concentration reaches more than 90 percent in the two cities in stock market activity, and here Toronto is far ahead. In all else, it is a draw.

Selected Data for Indicated Metropolitan Centers in Canada, about 1961
(for metropolitan census area - in percent of Canadian total)

	Montreal	Toronto	Vancouver	next ranking city
Population (1961)	11.6	10.0	4.3	2.6 (Winnipeg)
" (1966)	12.2	10.7	4.4	2.5 (")
Service receipts and retail sales	13.4	13.8	5.4	3.1
Value Added in Manufacturing	17.9	19.8	4.0	5.3 (Hamilton)
Checks Cleared at Clearing Houses	26.8	37.3	6.0	7.1 (Winnipeg)
Income Tax Paid	12.7	19.0	6.1	3.6 (")
Assets of Leading Corporations	38.1	36.7	6.3	5.0 (Calgary)
Assets of Financial Institutions	41.6	45.3	1.0	3.7 (London)
Value of Stock Market Transactions	26.3	67.1	6.3	0.2 (Calgary)
Domestic Airline Passenger Traffic*	17.6	23.3	10.9	6.6 (Edmonton)

*leading airports
outbound plus inbound
1965

Source: Kerr, Tables 16-1 to 16-6, 16-8.

Geographic analysis throws more light on the separate claims of Toronto and Montreal to metropolitan supremacy by the analysis of the in- and out-bound passenger traffic of the two cities with other Canadian major cities. The nul hypothesis is that such traffic will conform to the gravity model in which predicted traffic is some constant times the product of the two populations divided by the square of the distance between them. The model predicts well for most pairs [Kerr, 545], it is said, but high residuals - positive and negative - have significance.

Pairs of Cities with High Positive and Negative Residuals Resulting

from Relating Airline Passenger Traffic to the ratio $\frac{P_{ij} P_{ji}}{d_{ij}^2}$

High Positive Residuals
in descending order of importance

Toronto-Vancouver
St. Johns-Halifax
Toronto-Winnipeg
Toronto-Calgary
Toronto-Edmonton
Toronto-Halifax
Toronto-St. Johns
Vancouver-Winnipeg
Vancouver-Montreal
Vancouver-Ottawa

High Negative Residuals
in descending order of importance

London-Windsor
Sudbury-Quebec
Sudbury-St. John
Sudbury-Fort William
Sudbury-Regina
Sudbury-Ottawa
Sudbury-Montreal
Sudbury-Edmonton
Ottawa-Montreal
Moncton-St. John

Source: Kerr, Table 16-11, 545.

The residuals suggest that Toronto has a particular significance in close relations with distant cities, and that Sudbury, a large mining town, has limited relations with the cities about it because it is specialized on the one hand, and deals with the world through Toronto. It is equally of interest that St. Johns and Halifax have heavy interaction in the provinces, because they are so removed from other centers, whereas London and Windsor, both important manufacturing towns, deal little with each other because presumably their relations go through Toronto. Airplane traffic is not as useful for showing financial interaction as check clearings would be, but they throw an oblique light on interaction.

The Canadian case then differs from those studied in Europe in that the centripetal tendencies go less far than those observed in Europe, or have been arrested. Canada first detached its monetary and capital relations from London, and turned them to New York. Montreal balanced between London

and New York. Toronto then rose to assert independence from Montreal, with some duality: "One group of finance capitalists were to continue to shuttle back and forth between Toronto and Montreal, while others, including mining men, were to be just as solicitous in cultivating the New York market"

[Masters, 212]. The Dominion built up "Toronto-Montreal" as a counterweight to New York, fostering a market in Treasury bills in the 1950s, and a day-loan market, which enabled the Bank of Canada to control the money supply by internal operations, and not New York funds. In the same fashion, under the leadership of the Bank of British Columbia, Vancouver has set out to build its own money and capital market, with foreign-exchange operations in United States dollars directly with banks in Seattle, San Francisco and Los Angeles, rather than through Toronto-Montreal [Eaton and Bond, 15]. The difference in time zone, of course, contributed one reason, and distance, i.e. the cost of wire services may be another. It is paradoxical, except perhaps in terms of differences in rates of growth, that Canadian banks should abandon one coast - Nova Scotia - and cultivate the other.

The arguments for and against regional financial independence are summed up in a sentence from the Porter report a propos of stock markets, but applicable in general to money and capital markets:

"While a single national exchange would concentrate all trading, cause the markets to be broader and more resilient and might reduce trading costs per unit, it would fail to take account of the country's significant regional variety and of the need of local exchanges to provide a center for the shares of smaller and less nationally-known companies" [Royal Commission, 344].

The contrast runs to the remark quoted earlier from the Royal Bank's 50th anniversary celebration volume that if "enterprise of national importance is to be financed, the bank must be national in scope, with capital and reserves that its position could not be shaken by local losses" [Royal Bank of Canada, 17].

IX. New York as the Financial Center of the United States

The rise of New York as the financial center of the United States, winning out initially over Boston, Philadelphia and Baltimore in the first quarter of the 19th century, and beating back, so to speak, later challenges from Chicago and St. Louis is sufficiently familiar that it need not occupy us long. It is, moreover, well chronicled in Albion, Gras and Myers, and has an up-to-date analysis in Robbins and Terleckyj. Of the financial dominance of New York since 1825 there is no doubt. The remarkable feature is that it was maintained despite persistent attempts to defeat it, from the early efforts of rival cities, the Second Bank of the United States in Philadelphia, and the National Bank Act of 1863 to the attempt embodied in the Federal Reserve Act of 1913. Economies of scale in money and finance proved stronger than the institutional enactments against them.

Prior to the end of the Napoleonic Wars there was no clear ascendancy of one North Atlantic American port over the others. Each had its hinterland. After 1815, well before the completion of the Erie Canal, New York took steps to pull ahead. British supplies accumulated during the Wars were dumped there. When commission merchants threatened to hold them back for higher prices, New York enacted an auction law which made all sales final, and forbade withdrawing goods once offered for sale. Jobbers, wholesalers and country merchants flocked to the port. In 1818 a New York

merchant started the first liner service, by sailing packet to Liverpool; a ship left promptly on schedule whether it had a full cargo or not. These actions created a demand for sterling. To provide a supply merchants, shippers and bankers - then indistinguishable from one another - sought the financing of cotton and grain. Planters were continuously in debt with the need to buy more land and slaves. New York bankers advanced them funds to ensure that cotton bound for Liverpool from New Orleans, Mobile, Savannah or Charleston would be shipped coastwise to New York and then across, a diversion of 200 miles which after 1850 proved physically unnecessary. The Erie Canal, projected in 1818, was finished in 1825. That same year New York bankers advanced a large loan to the state of Ohio to divert the grain trade from the Ohio and Mississippi rivers to the canal and New York [Albion, 1-93]. Baltimore was slow building the Chesapeake and Ohio Canal. It was still under construction when the opportunity came to build the Baltimore and Ohio railroad. Philadelphia tried to meet the competition by the Main Line railroad, built between 1827 and 1837, from the city to the Susquehanna River, then by boat to the Alleghanies, with produce hauled over the mountains by stationary engine. It was clumsy and inefficient. Boston tunnelled the Berkshires with the Boston and Albany railroad by 1842, but still had to rely on the Erie Canal for western produce. Supplementing the canal by the New York Central on a waterlevel route, New York stayed ahead [*ibid.*, 378-81]. When Andrew Jackson destroyed Philadelphia's Second Bank of the United States in 1836, New York's position was assured.

A good illustration is the experience of Alexander Brown and Sons of Baltimore. The father came to the United States from Ulster in 1800, opened an Irish-linen warehouse in Baltimore in that year, distributing bulky goods

through Maryland and Virginia. With numerous sons, he took William into partnership in Baltimore in 1805, sought to open a branch in Philadelphia in 1806 and again in 1809, but succeeded only through his son John in 1818. By this time William was in Liverpool, and Liverpool and Philadelphia had outstripped Baltimore. By 1825 it was clear that New York was the most interesting center, and in that year son James opened Brown Brothers & Company primarily to promote the interests of the Liverpool house, William and James Brown & Co. Baltimore remained the head of the family enterprises until Alexander's death in 1834. For the last years of his life, however, the backbone of the commission business was the sale in New York or shipment to Liverpool of the cotton sent by Southern correspondents. The first 1825 New York circular of Brown Brothers and Co. indicated correspondents in New Orleans, Mobile, Charleston, Savannah and Huntsville [Kouwenhoven, 20-31].

Others to desert Baltimore were George W. Peabody, Elisha Riggs, and William W. Corcoran. Peabody, from Boston, was teamed up with Riggs, serving as London commission agent. The American end of Peabody and Riggs moved to New York in the late 1830s and subsequently broke up, with Peabody in London founding the firm which later developed into J. P. Morgan & Co [Hidy, 15, 95, 136, 237]. Riggs then went into the securities business with Corcoran, and at some stage, probably at the time of the Mexican War, both moved to Washington to deal in United States securities. Here is the direct pull of the capital. Note, however, that neither made an optimal choice in terms of maximizing wealth, as the Riggs Bank and the Corcoran securities business, while profitable, remained small compared to New York operations.

New York attracted people as well as goods and money. Most came from Connecticut and Massachusetts, (south of the Cape and west of Worcester beyond which the pull of Boston dominated), with few, apart from the Stevens family, from New Jersey. New Englanders captured the New York port about 1820 and dominated its business until after the Civil War [Albion, 238-42]. The analogue is with the Scots in banking and accounting in London. While no explanation is given for the divergent behavior of New Jersey and Connecticut, the answer is likely to be found in the different character of the soil, flat and relatively rich on the one hand, hilly and rocky on the other.

As New York became the financial center of the country, the practice developed of maintaining bankers' balances in the city. A substantial seasonal movement had to be handled. New York funds were built up during the harvest and movement of crops, drawn down consistently during the rest of the year. New York funds bore a premium over those in Philadelphia and other centers in exchange rate, which was resented by other parts of the country. Measures were taken by states to prevent the drain of funds to New York, e.g. a Connecticut requirement in 1848 of a minimum reserve of 10 percent in vault cash, prohibition in 1854 against lending out of state more than one quarter of a bank's capital and surplus; positive requirement that loans must be made within the state up to the amount of capital and surplus before any could be loaned outside. None of these devices proved effective. Country banks found New York paper and deposits among the safest and most reliable investments. As in England, provision was made in New York state for the redemption of notes issued by country banks either at their seat or in New York, Troy or Albany, a further incentive to build up New York balances [Myers, chap. vi]. The city served as an intermediary

between Europe and the South and West, and balanced the country movement of cash on a seasonal basis as well.

The National Bank Act of 1863 furnished legal recognition of the New York banks' role as the ultimate banking reserve of the country. The original legislation provided that country banks could keep as little as 2/5ths of the mandatory 25% reserves in vault cash, and the remainder in a national bank in one of nine cities: Boston, Providence, New York, Philadelphia, Cincinnati, New Orleans, Chicago and St. Louis. This was hard on the reserve cities outside New York which normally kept New York funds but now had to keep their entire reserve in currency. Revision of the law in 1864 provided for 18 "redemption cities," enlarged from the previous list, which could keep half their 25 percent reserve in New York. "Country banks" were permitted to maintain 2/5ths in deposits in a national bank in any redemption city. In effect New York was a central reserve city and the other 17 reserve cities [*ibid.*, chap. xi].

In 1887 the legislation was amended to permit any city of more than 200,000 inhabitants to become a central reserve city. Chicago and St. Louis accepted, "determined to wrest from New York its prestige and financial preeminence" [*ibid.*, 240]. St. Louis complained that merchants making payments to other cities bought drafts on New York rather than sending checks on St. Louis banks [Gras, 266]. It was to little avail. Bank balances rose rapidly in the two cities, but those in New York did not slow down. Chicago and St. Louis attracted deposits from their areas, but cities even further west and further south kept correspondent balances in New York.

The Federal Reserve Act of 1913 represented an extension of resistance to the financial domination of New York. It "struck a heavy but not a death

blow," it was said in 1922 [ibid.,]. The statement seems exaggerated even for its time. New York remained the leading financial center, unchallenged by the 11 other places chosen as regional centers for the other districts. Individual institutions like the Bank of America rose to the top ranks of the country by size by virtue of branching permitted in California, though the general rule of unit banking failed to prevent New York banks in size and number from dominating the country.

The Federal Reserve Act was based on the theory that there would develop regional money and capital markets centered around the locations of the twelve district banks. Implicitly the Act contemplated separate monetary policies for the twelve districts. A structure of rates developed with the lowest rates charged customers, for example, in New York, and higher rates by size of city and as one moved from North and East to South and West [Riefler, 65, 72; Lösch, 461f]. Fluctuations in the rate were wider in New York than in the outlying portions of the market [Riefler, 74]. But there was only one money market, and only one monetary policy, focussed on New York. Discount policy was unified, and open-market policy too. New York's facilities were more specialized, more competitive, more available to other regions. Half of the loans of New York City's banks were for borrowers outside the city, as contrasted with 8.2 percent for Chicago, 7.8 percent for Dallas, and 6.3 percent for San Francisco - the three nearest competitors [Robbins and Terleckyj, 85]. New York was also the center for international finance.

Here is a clear example of economies of scale. The financial center was a port when the connection of finance to ports had diminished. It was not an administrative capital, nor a central location. Its dominance continued through strong resistance implicit in Populism, and political steps

to reduce its role, through insistence on unit, rather than branch banking, and efforts to create other financial centers by legislation.

The 1959 movement of the head office of the First National City Bank from Wall Street to a mid-town location on Park Avenue raises a series of new questions. Have the economies of centralization been exaggerated, or is modern communication reducing them? Is propinquity to corporate head offices for bank decision-makers more important than ready access to other banks, law offices and financial markets for treasury bills, foreign exchange, commercial paper, stocks, bonds and the like? The bank left the bulk of its check handling in down-town Manhattan, close to the other banks and the clearing house but far from headquarters. It is understood that this creates some problems. In London, City banks acquired West End banks (by merger rather than building new branches in competition with existing institutions) to serve the convenience of non-financial clients. In New York, later, the same forces threaten to reverse the centralization process.

X. International Financial Centers

The concentration that produces a single dominant financial center within a country - with the exception of Canada - tends to result in the emergence of a single center worldwide, with highly specialized functions in lending abroad and in serving as a pivot for clearing payments among countries. Banks, brokers, security dealers and the like establish branches in such centers. The process is similar to that which takes place within a country, although the barriers of exchange risk and higher transactions costs prevent it from being carried as far.

Court, merchant and security banking spread internationally as within countries, by the process of branching, originally best carried on by large

families of male members. The court banking five Rothschild brothers moved out after the Napoleonic Wars to Vienna, Frankfurt, Amsterdam, Paris and London. Alexander Brown and Sons used four sons to extend its merchant banking business from Baltimore to Philadelphia, New York, Boston and Liverpool. It has been suggested that one of the reasons for extending the business in space, apart from the efficiency, was that the father, Alexander, found it difficult to live in close proximity with the most dynamic son, William. Early American bankers in France, such as Welles and Greene, associated with Boston Welles cousins, went to Paris and Le Havre in 1817, and Fitch and Co. of New York established a branch with a brother in Marseilles, in the 1830s [Redlich, II, 60]. The eight Seligmann brothers in the early 1860s went from New York and San Francisco to Frankfurt, Paris, London, the central financial capitals rather than the ports, Amsterdam, and New Orleans largely to sell United States securities [Seligmann, 115]. The Philadelphia banker Drexel, who had moved from dealing in foreign exchange in Louisville, Kentucky in 1837, had three sons. Joseph William set up the Paris allied firm in 1867, and teamed up with J. P. Morgan in New York in 1871 to provide a network for selling United States securities in Europe in close cooperation with his brothers in Philadelphia [Hopkinson, passim].

It is not entirely clear that there was a dominant financial center in Europe prior to 1870. American banks went to London, Liverpool, Paris, and Marseilles, as noted. London bankers established themselves in Paris. Baring Brothers teamed up with Hope and Co. of Amsterdam. It seems doubtful that the economies of scale had extended far enough that one center existed. Prussia placed loans abroad in Hamburg, Frankfurt, Kassel, Leipsig, Amsterdam and Genoa in the 1790s [Brockhage, 34-35]. By 1820, it was borrowing

in Amsterdam on foreign issues, and in Frankfurt for domestic, with Amsterdam the first trading city on the Continent for public loans - Prussian, Austrian and Russian. Interest rates differed widely among financial centers [ibid., 54].

British foreign lending at short term was stimulated by the usury laws of 1571 which limited interest charged to a stipulated rate which successively declined from an original 10 percent to 8 percent in 1623, 6 percent in 1660, and finally 5 percent in 1713 until their repeal in 1854. Akin to the interest ceilings of Regulation Q in the United States, which did not apply to foreign time deposits and thereby stimulated the movement of funds to the Euro-dollar market in the late 1950s, acceptances on foreign bills permitted charging commissions as well as interest, and thus avoiding the usury laws, as some domestic borrowers complained [Leighton-Boyce, 10, 61, 205]. By the time the usury laws were eliminated, this man-made distortion no longer had importance in stimulating the flow of British capital abroad, inasmuch as British savings exceeded domestic demand at going rates of interest, and the efficiency of the London market kept transactions costs low.

By the mid-1820s, Britain was a substantial exporter of capital on long-term account. In one view, Britain had a monopoly of capital exports to 1850, and then France moved in, largely for gloire, i.e. capital exports in the service of national policies [Rosenberg, 38]. This view is not universally shared. An opposite opinion runs:

"during the early years of the 19th century, Paris had held pride of place as the principal international banking center, but subsequently London steadily overtook her...After suspension of specie payments by the Bank of France in 1848, London banks became busier

in international affairs, with more and more bills domiciled in London: [Crick and Wadsworth, 307].

Whether London or Paris had been the leader in the second quarter of the century, the role was contested during twenty years after mid-century, when Paris finally lost out.

"All great communities have at times to pay large sums in cash, and of that cash a great store must be kept somewhere. Formerly there were two great stores in Europe, one was the Bank of France and one was the Bank of England. But since the suspension of specie payments by the Bank of France [in the war of 1870] its use as a reservoir of specie is at an end....Accordingly London has become the sole great settling house of exchange transactions in Europe, instead of being formerly one of two. And this pre-eminence London will probably retain for it is a natural pre-eminence. The number of mercantile bills incalculably surpasses those drawn on any other city....The pre-eminence of Paris partly rose from a distribution of political power" [Bagehot, 16].

The pivotal role of London was enhanced by its part in transferring the Franco-Prussian indemnity. The new German government ended up with substantial claims on sterling, which helped, along with the Vienna stock market crash, to precipitate the Great Depression [Newbold, 438].

Whether London focussed so heavily on foreign lending that it neglected the provision of finance to domestic industry is a familiar issue incapable of clearcut answer. The presumption is that it did not; in numerous industries which required large amounts of capital: for a long time, railroads, then shipping, iron and steel, cotton, banking and finance, later coal,

public utilities and communications, the London Stock Exchange had been responsive to the capital needs of industry [Jeffrys, 62, 121]. In addition, private companies went public in manufacturing, and such profitable enterprises as brewing. Investors wanting trustee securities lost their taste for industrial shares and preferred foreign railroad and government bonds [Kindleberger, 1964, 61-64]. On the whole, however, domestic and foreign lending are complements, not substitutes overall, even though in the British case, they were cyclically opposed.

After 1870, France did not contest British financial leadership. On the contrary, on such occasions as the Baring crisis of 1890, it supported it with a gold loan from the Bank of France to the Bank of England. While the apex of the financial system of the world was London, foreign balances were maintained by central banks in Paris and Berlin, like provincial cities in a national system.

The attempt at resistance by Germany, led by the Deutsche Bank, and its failure, have been detailed above under Section V. Hamburg was prepared to challenge London's prominence in shipping, and support the German program of naval construction [Cecil, passim], but not to contest the financial position of London. It had a special place in financing German trade, and in providing a market for Northern securities [Wiskemann, 273], but it was too provincial vis-a-vis Berlin on domestic matters and London on international. The Deutsche Bank with a few others opened up a branch in London. Mainly, however, it contested British financial hegemony in the narrow arena of the Ottoman Empire, or took on the clients of the weakened French, in Italy.

New York's challenge to the dominance of London has been traced back

to 1900. In his report for 1904, the Comptroller of the Currency recommended that national banks with more than \$1 million of capital be allowed to accept bills of exchange and establish foreign branches. The panic of 1907 when American banks borrowed more than \$500 millions from Europe to overcome the inelasticity of the money supply is stated to have given rise to the view that the American economy had grown to such an extent that Europe could no longer carry it, and that an American solution was necessary [Abrahams, 10].

As in 1870, however, it was war which turned positions sharply. J. P. Morgan & Co. provided an early credit to the French government against gold deposited in the vault of the Morgan Harjes bank in Paris. In 1916 three leading American banks, the Guaranty Trust, the Bankers Trust and J. P. Morgan, organized a syndicate under which 175 American banks made loans under acceptance credits to 75 French firms. A number of commercial bank branches opened in France and Britain in the early years of the century were expanded during the war, and new ones established, to serve both governmental finance and industry, but especially to handle monies for the United States army.

Further branches were organized after the war in a massive expansion but subsided after the 1920 boom. H. Parker Willis spoke of the "unfavorable experience gained by some American banks which went hastily into foreign countries during the years 1919 and 1920" [introduction to Phelps, iii]. Substantial foreign lending by Wall Street began with the success of the Dawes loan in 1924, but declined after June 1928 when the stock market rise diverted attention to that outlet. Foreign and especially German borrowing shifted to the short-term market and finance paper, to slow down in 1930 and to stop completely after the Standstill Agreement of July 1931.

From 1914 on London had difficulty in maintaining its role as a center for foreign reserves and a source of short- and long-term credit. The rise of New York produced two reactions: one of anguish at loss of leadership, the other of relief at the shifting of responsibility. The head of the London City and Midland Bank (as it was known then) "publicly wept" over the passing of sterling supremacy, while the head of the Hong-kong and Shanghai Bank was enthusiastic about the rise of New York credits, telling Benjamin Strong - "and most English bankers agreed with him" - that New York must carry some of the load for financing the world's commerce [Abrahams, 53].

I have dealt elsewhere with the interwar period and the hiatus created by British inability to serve as a lender of last resort for Europe, and United States unwillingness, up at least to the Tripartite Monetary Agreement of September 26, 1936 [Kindleberger, 1973, passim]. In this view the 1929 depression was the consequence of an ineffective transition of the financial center from London to New York. The position differs from that in which new centers rise to challenge old, and to wrest financial supremacy or responsibility from them. In this instance an old center lost capacity to serve as the center of the world financial system, and the most promising candidate for the position was unwilling, or too inept, to fulfill the responsibilities.

From 1936 on, and especially during the Second World War, the United States increasingly accepted financial world leadership. The first steps were governmental. The Anglo-American Financial Agreement of 1946 represented a "key-currency" approach in which sterling would be restored to health first as a means of rebuilding the financial system, and the sterling

area play an important, and possibly even co-equal role with the dollar. In the first Marshall Plan discussions, however, in July 1947, Clayton and Douglas rejected the suggestion of Bevin and Dalton that the United States undertake a new program of assistance to Britain following which they would approach Europe in "financial partnership" [Department of State, 269, 272]. Gradually the New York market recovered its interest in lending abroad, at long term and short. From the early fifties, New York was the world financial center until the end of the decade when the Euro-dollar market began to develop.

The emphasis in this paper is historical, and the transition from New York as the leading financial center to the Euro-dollar market, or its breakdown with the events of August 1971, the Smithsonian devaluation and the floating period begun in February 1973 will be ignored. Several points about the process may be made, however. United States banks and security dealers increased the number and size of their European branches. In the early period, the major efforts abroad came from New York banks in London as dealers in dollars. In the crunch of 1966 and 1969-70, a number of banks throughout the United States went to London not to lend, but to be in position to borrow dollars to add to reserves in the United States. Second, much of the foreign branching was defensive investment, going abroad not so much to earn profits as to prevent the loss of clients: as American corporations moved abroad, their bankers went with them. Third, with the forced devaluation of the dollar in August 1971, and the Smithsonian agreement of December of that year, and the period of floating in response to adverse speculation beginning in February 1973, the Euro-dollar and Euro-dollar bond markets dried up substantially.

After the second devaluation trade payments and long-term contracts came to be denominated in other currencies than dollars. While borrowers were willing to go short of dollars, private parties outside the United States were less willing to go long. In Euro-currency and bond markets, the dollar was less widely used. No single currency took its place, however: the Deutschemark, Swiss franc, Japanese yen, and to a lesser extent the guilder and Belgian franc severally replaced the dollar as international money. As the dollar declined in world financial use, no other currency or center, for the time being at least, rose to take its place. The international payments mechanism thereby lost the efficiency which comes from centralizing payments.

One possibility is that the European Economic Community may develop as a money and capital market to replace the Euro-dollar market in the world financial system.

XI. A Financial Center for Europe?

European economic integration, and especially the formation of the European Economic Community, raise the question whether the forces discussed in historical context may be expected to result, sooner or later, in financial centralization which is geographical in nature. To pose the question is to review the forces which in the past have led to the formation of financial centers.

A European Currency

Is a European currency needed before one can develop an efficient money and capital market? The answer is almost certainly yes. The Segré report proposed to achieve an integrated money and capital market, presumably concentrated in space although the issue was not addressed, by removing national

restrictions on lending and harmonizing regulations. The resultant market would still have been divided by currency. The Werner report contains recognition that integration of financial institutions implies development of a single money. In some views, it is necessary to go further and develop common long-term assets which are included in portfolios of participating nations.

The London capital market operated in sterling, New York and the Euro-dollar markets in dollars. The movement toward world financial integration has been set back by currency realignments and floating. The development of a European capital market serving the world as well as European needs requires a European currency.

History suggests that this is conveniently accomplished by taking an existing money and converting others into it. In Germany, the Prussian taler was adopted, but called the mark after the currency used in Hamburg. In Italy, the process was more complex, involving reduction of 10 separate currencies to four and then four to one, the one being the new lira of Piedmont which had taken the leadership in the political process of unification. The process took a decade [De Mattia, passim; Luzzatto, 1963, 60ff]. If a national currency were chosen as the basis for the new currency - basing the new currency on, say, the DM but calling it the "ecu" (an acronym for European Currency Unit and an ancient French coin), it might confer an advantage on the established financial center associated with the chosen currency, in this case Frankfurt. It is likely that Berlin benefited from the choice of the Prussian thaler, and Turin from that of the Piedmont lira.

An attempt to create an entirely new currency would presumably not affect the ultimate choice of a particular financial center, assuming that

the currency was successfully established and the agglomeration process envisaged actually occurred. Some unexpected side effects would probably occur. There is, of course, a question whether the public would in fact go over to the synthetic currency. Conversion of the old to the new franc in 1958 by dividing by 100 affected children and tourists more than it did the French population which continued to reckon - as a unit of account - in old francs. On the other hand, the conversion of sterling to the decimal system in 1970 was relatively painless. Money is established not by fiat but by public acceptance, and public acceptance in nine countries of a synthetic new money cannot be guaranteed. Such acceptance is necessary, however, to the creation of a single financial center.

Central bank

Development of a European money requires ultimately a European central bank, and meanwhile a pooling of foreign-exchange reserves. It is not evident that the latter must have a physical embodiment and staff; the former will. If a single central bank, the Bank of England, the Bank of France, the Bundesbank or any other were chosen as the European central bank with other central banks merged into it, its existing location might well have an effect on the ultimate choice by the market of a physical center. The example of the Bank of Italy in Rome, far from the financial center in Milan, however, makes one wary of certainty.

History suggests, however, that choice of one among a number of competing centers is normally evaded in the process of merging banks. The new European central bank would probably begin as a "federal reserve" system in which the various central banks took places, initially as separate, ultimately as fully-articulated subordinate units. The managing board

might be located in a non-financial center, comparable to Washington, Ottawa, or Berne. With the passage of time, one regional bank would come to dominate others, as New York dominates Boston, Philadelphia, Richmond, etc. The Board in Basle or some such place would probably have little attractive force.

If the European Central Bank were located in the same center as the capital of the European Economic Community - with various other organs of the EEC brought together in one center, rather than parcelled out, and the location chosen were an existing financial community of vitality, this might unleash centripetal tendencies.

Administrative Capital

As just indicated, the concentration of the administrative machinery including the European Central Bank in an existing financial center would be likely to serve as a magnet to other financial institutions and to attract them into a single primary location. The creation of a new capital would surely not, as Rome, Berne, Washington, Ottawa, Canberra, and a host of other examples testify. Presumably other factors would have to be at least neutral - with enough tradition, savings which are available for investment throughout the community, and the like. The interesting question is whether if France persuaded EEC to choose Paris over Brussels as the capital, its strong tradition of the last third of a century against foreign lending would stand in the way of success in financial concentration.

Tradition

Tradition favors London as the financial center. London has skill and tradition, but it is doubtful that these are enough. It is necessary also to have savings, to enable one's dealers to make a market, to lend when the

rest of the market is borrowing, and sell out of inventory, when the rest is buying. The success of London in capturing the lion's share of the Euro-money market arose from the presence there of major branches of United States banks, which provided savings. British savings are limited in amount, concentrated in institutionalized form, such as insurance and pension funds, that no longer flow in foreign investments, and are in any case held at home by investment controls. It is conceivable that skill and tradition are enough to bring the European financial center to London on the basis of brokerage, with the British participants not taking a position. It is not likely.

Economies of Scale

Clustering develops when the high risks of an activity can be reduced by continuous interchange of information [Robbins and Terleckyj, 35]. It is possible to do this by telephone and telex, but expensive and for many financial functions of uncertainty, better done face-to-face. Robbins and Terleckyj note that the central financial district of lower Manhattan minimizes communications costs: in 1960, a financial house with 120 lines to New York houses would pay \$420 monthly rental if located in New York, \$230,000 if Chicago, and \$640,000 if Los Angeles [*ibid.*, 35]. Presumably communications costs have declined in the last fifteen years. The figures are not so high as to prevent head offices of a limited number of banks being located in Toronto and Montreal in Canada, or Basle and Zurich in Switzerland. They are not likely to be so low as to eliminate all tendency to clustering. A network of banks located in all the financial capitals of Europe - London, Paris, Frankfurt, Amsterdam, Brussels, Milan, Zurich would not be inexpensive.

Note the unimportance of clustering for new security issues. Syndicates in new issues consist of firms located virtually everywhere. Efficiency of secondary markets, however, requires concentration so as to eliminate the necessity to search over wide distances for price information or to maintain continuous interchange. Long-distance arbitrage does take place in securities - in kaffirs (gold-mining stocks) between London and Johannesburg, South Africa, and between major European markets and New York. The numbers of securities handled in this arbitrage are limited, however, and efficiency of a diffuse market achieved through arbitrage comes at the expense of efficiency in handling a large number of issues.

It has been said that the secondary market is unimportant for corporate bonds, as most investors keep them until they mature or are otherwise retired [Robinson, 19, 202]. This does not seem to be borne out for the Euro-bond market, if one can judge by the number of articles devoted to "the major weakness of the Euro-bond market...trading rather than issuing" [Yassukovich, Low September 1972, Lutz]. In addition, price exchanges among London, Brussels, Geneva, and Zurich where the six leading traders - three of them American firms - were located in 1969 - today Frankfurt, Paris, Luxemburg, and some centers in Canada and the United States have to be covered [Low, 1157-58]. In addition, there are problems of delays in payment and delivery of bonds. To meet the last, the Morgan Guaranty Trust Company organized "Euroclear" in Brussels in 1968, Barclays Bank International founded Eurobond Clearing House in London in 1969, and a group of Luxemburg banks organized a Center of Delivery of Euro-Securities in Luxemburg (CEDEL) in 1971. That these arrangements were unsatisfactory is indicated by first, abandonment by Barclays Bank International of Eurobond

Clearing House and the substitution of a different system of Registered Depository Receipts [McRae, 33]; second, by agreement for collaboration between Euroclear and CEDEL after long negotiations sponsored by the Association of International Bond Dealers; and third, decision of the Morgan Guaranty Trust Company to sell Euroclear while making an agreement to render it banking services for five years. This last step represents an improvement by reason of eliminating the control of the clearing house by a single bank. At the time it was stated that the number of participants in Euroclear had risen from 74 in 1968 to 376 in 1972 [Low, August 1972, 31].

In 1971, it was suggested that there was no need for a single center to emerge as the center for the secondary market - "the true marketplace" [Kohn, 70]. While "in any particular time one locale is more attractive than another," the market really has no center at all - not London or Luxemburg, Frankfurt or Brussels, Paris or Geneva, et cetera; it is a mistake to expect market makers to deal either way in all circumstances. This seems to reflect the position in transition or flux, before an efficient centralized system has been developed.

The achievement of economies of scale in a concentrated center - an evolutionary and time-consuming process as the historical record shows - has been disrupted by the 1971-73 currency realignments and floating. When and if a European currency is established, or the Euro-dollar recovers strength and is reestablished as international money, scale economies are likely ultimately to press for agglomeration. Existing participants in the Euro-currency and Euro-bond markets may be content to remain where they are and deal with one another by telex and telephone. This is truer for

the Euro-currency market and for new issues than for the secondary market. New entrants, however, will be drawn to optimal locations, and this is likely to be a single place. Banks and security dealers located in many centers will cut down on less efficient locations in periods of recession, and expand the efficient, when recovery comes. The process is slow and not without false starts and setbacks. It seems doubtful that the decline in cost of communication has been sufficiently great as to eliminate the tendency.

Where? The choice would seem to lie between Brussels and London, as the Euroclear, CEDEL, Barclay's experience suggests. But the outcome is likely to rest on other factors. Economies of scale only predict one center, not which.

Central location

The Christaller view of central location for a metropolis probably holds at the extremes: Edinburgh, Copenhagen, and Rome need not apply. It cannot count for much among London, Paris, Zurich or Geneva, if Switzerland were to join the EEC, Frankfurt, Brussels, Amsterdam. Probably even Hamburg or Munich would not be excluded for failing to stand at the epicenter.

Transport

While metropolitan centers have grown at breaks in transport, it is possible today within wide limits to adjust transport to function. A few communities are so hemmed in between mountains and sea - for example, Wellington, New Zealand, - that developing a major airport can be undertaken only with exorbitant expense. Cities that are limited in population may have difficulty in supporting lumpy transport facilities necessary for

effective communication. On the whole, however, there are few limits among European cities. It might be difficult and expensive to develop a major jet airport at Basle, and the choice of a given center is likely to take into account existing facilities, so as to avoid the need for undertaking new. But the issue today is not fundamental.

Headquarters of Multinational Corporations

Is there a likelihood that banks, perhaps starting with United States banks, would drift into a single center, or build up their offices in such a center, and perhaps put that office in charge of European branches, if a number of multinational corporations, particularly those of United States ownership, were to congregate? The reason for attributing particular behavior to foreign corporations and foreign banks is that in the context of European integration they are more mobile than "native" corporations and banks. American corporations are likely to be located in a more economic pattern in Canada than Canadian corporations, since the latter have a strong resistance to leaving the place they started. It may well be in Canada, however, that the location of the U.S. parent corporation cast an economic shadow across the border, as Ray suggested. The location of United States subsidiaries in Europe is likely to have no such influence in their choice. In contrast French corporations may move their headquarters from Lyons to Paris, as we have suggested, but are not likely to continue further to London, Brussels, Frankfurt, etc.

What governs the choice of headquarters location for an American firm in Europe? The location of the initial investment was undertaken often in Britain, on the basis of similarity of language and culture; in a particular country from which early forebears of major decision-makers had migrated to

the United States; or to centers thought to be agreeable, especially Paris. Later, and before the Common Market, it was frequently judged necessary to produce in each country in which one wanted to sell. "To sell in France, produce in France." The advent of the Common Market, and the conversion of the Six into the Nine has changed this less than had been anticipated. With time, however, and as the EEC seems more solid and less ephemeral, other firms may follow the pattern of IBM which is said to have rationalized its production to take advantage of the elimination of tariffs, or of Ford the major facilities of which involve exchange of parts between Antwerp and Cologne.

What is relevant, however, is not the location of production facilities but of company headquarters. In Germany, this was attracted after World War II to the American military headquarters in Frankfurt. Today, more and more American companies seem to develop an affinity for headquarters of the European Commission in Brussels. Sales headquarters may be divided culturally between Latin and Germanic countries, in some cases splitting Switzerland between two European headquarters. Financial headquarters of some companies have been located in London. Where companies have one headquarters, and it is not established in the last 15 years at Brussels, it has typically been with the largest production facilities, or in London or Paris. If there is a trend, it is probably to Brussels.

Major American banks in Europe have not designated any one branch to head up their European network as a whole. London, Brussels, Paris, Frankfurt, Zurich, Geneva, Rome report separately to the head office, and coordination among them is directed from New York. It is not evident that this is efficient. It is likely rather that the matter is allowed to

continue unresolved, pending the emergence of a particular location as the dominant center.

Culture

One possibility is that there will be no emergence of a single financial center for cultural reasons, as perhaps contributed to the stalemate between Toronto and Montreal, and, according to some authors, to the survival of Basle and Geneva as financial centers in the face of the competition of Zurich. French corporations stay in Paris, Belgian in Brussels, Dutch in Amsterdam, German in Dusseldorf, Hamburg and Frankfurt; international banking cooperation as among the Credit Lyonnais, the Banca Commerciale Italiana, Deutsche Bank and Morgan Guaranty Trust remains volitional for separate deals, and not a true merger with unified decision-making. Based on the historical evidence, one would expect the emergence of a true financial center to involve takeovers, mergers, amalgamations. In the last fifteen years, they have been few.

This is perhaps the crux. If there is no integration beyond tariff removal and collaboration in international economic negotiation, there will be no single European financial center apart from the world system. Like the banks in the hinterland of St. Louis and Chicago which kept correspondent balances in New York, European financial institutions will deal partly with the Community, and partly outside. During the period of the Euro-dollar, the separate financial markets of the Six were more effectively joined with the Euro-dollar market than they were with each other. If a European center emerges as the apex of the world hierarchical system, and Europe does not achieve effective integration, sections of the capital market in Europe may be linked to the center through outside connections as part of the world feeder system.

Policy

Governmental policy can accelerate the emergence of a given city as the primary financial center, it can slow the process down, but it can probably not change the outcome. Too strongly pressing centralization will create resistance, and strong efforts for decentralization can be overcome by private forces. Whether the United States could recreate a New York financial center for the world after the troubles of the dollar which were handled maladroitly is dubious. Whether the Swiss or German authorities can prevent their financial capitals from being developed to serve as a world center is less so. It is difficult to use exchange control to prevent inflows of hot money, but one can forbid the development of the positive institutions which will effectively employ foreign monies in domestic and foreign lending.

Policy requires more than governmental agreement. The Segré report on the unification of the European capital market was widely agreed, but nothing happened. No European country was deeply committed to building a well-functioning European capital market.

Accordingly, I predict, very tentatively, that Brussels is the leading candidate as the financial center of the European Economic Community on the basis of serving as headquarters for the Commission, its attraction for foreign corporations, and ultimately foreign and European banks. The process will be long drawn out. Commitments to European integration does not go deep. Such countries as France will push the advantages of Paris as the federal administrative center, and incidentally for financial institutions, but with little likelihood of consent of the other members. Sterling is too weak, and British savings too little available to advance London's claim

for consideration. The advantages of centralization are less compelling than they were in the middle of the 19th century. They still exist. Despite cultural resistance, and only with difficulty, I predict centralization will take place, but not before the late 1980s.

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